## RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

#### FREIGHT TRAFFIC ISSUE

**NOVEMBER 5, 1951** 



in the B&O's new ore pier and bridges—

#### Handrailings and deckplates are BYERS WROUGHT IRON

Because of the extensive network of handrailings which serve the many walkways and stairways on the Baltimore and Ohio Railroad's new Curtis Bay Ore Pier, the use of a durable material for the service was vital to the control of excessive maintenance and repair. B&O engineers solved the problem in a time-proven way by specifying genuine wrought iron. Over 25 tons of Byers Wrought Iron was fabricated into railings and installed on the ore pier, the unloading machines and conveyor belt. Several of the railings are shown in the main illustration above. Genuine wrought iron was also used to safeguard the handrailings and deckplates on three recently completed ballast deck bridges which Carry the B&O into the pier area. Over 66 tons of Byers Wrought Iron was fabricated into 1/2-inch plates and used to surface the bridges. The insert photo shows the completed structures.

Genuine wrought iron has demonstrated its superior service qualities in handrailing and deckplate applications many times over. Because it is inherently resistant to corrosion it does not depend on frequent and periodic painting for protection when used for railings. If the scheduled painting must be deferred, the life of genuine wrought iron railings is not threatened. The same service qualities overcome excessive maintenance in deckplate applications where acid drippings from coal cars and run-off water present corrosive threats.

You'll find some helpful information in our bulletin, WROUGHT IRON IN BRIDGE CONSTRUC-

TION. Write for a copy.

A.M. Byers Company, Pittsburgh,
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Atlanta, Chicago, St. Louis, Houston,
San Francisco. Export Division:
New York, N. Y.



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This notch-fracture test specimen illustrates the unique fibrous structure of genuine wrought iron—which is responsible for the high corrosion resistance of the material. Tiny threads of glass-like silicate slag, distributed through the body of high-purity iron, halt and disperse corrosive attack, and discourage pitting and penetration. They also anchor the initial protective scale, which shields the underlying metal.

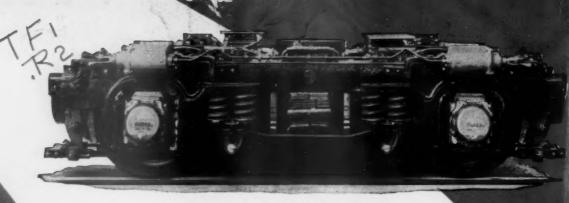
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CORROSION COSTS YOU MORE THAN WROUGHT IRON

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Commonwealth 4-wheel motor truck for "C" Line Locomotives

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COMMONWEALTH Motor Trucks of 4-wheel and 6-wheel swing-motion equalized designs having one-piece cast steel truck frames and bolsters.

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FRICTION DRAFT GEAR

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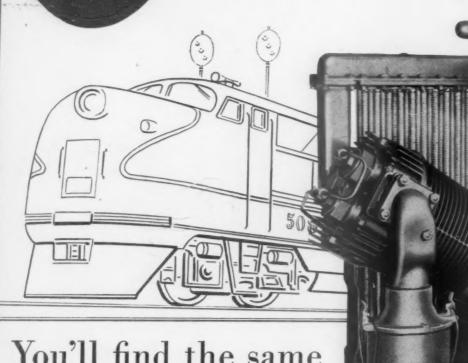
W.H. MINER, IN CLASS A-22-X A A R 1941 APPROVED 1947

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#### E-CONTROL\* PACKAGE

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The A-S-F Ride-Control Package has been redesigned and re-engineered to give you even longer life and simpler installation-in addition to all its well known features. Here are the changes:

Top and bottom plates have been completely redesigned for greater strength and longer service life. This results from A-S-F's program of constant product development and improvement.

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Installation has been simplified. In the old design, springs were held under compression by a bar, to be removed after installation to permit maximum spring travel. In the new Package, an ingenious arrangement holds the springs under compression. Small blocks mounted on a spring strip are set between bolt washers and the underside of the bottom plate. At the first pressure of car weight or the first service bump, the springy strip snaps these blocks out from between bolt washer and plate, permitting full floating spring travel. It's proof against forgetfulness

#### GIVES OLD FREIGHT CARS AN EASIER RIDE

The new easy-to-install Ride-Control Package applies the famous A-S-F Ride-Control principle to existing freight cars. It gives 21/2 to 3 inches of spring travel in place of the old AAR-standard 1% to 1% inches. Obviously the softer springs and longer

travel, properly controlled, give an easier ride. The friction principle provides three-way control-lateral, longitudinal, and vertical. Load and friction springs combine to make the unit self-centering.

#### SAVES THESE THREE WAYS

Ride-Control saves much more than it costs. It helps protect lading and cut claims. It helps protect rolling stock and cut repair costs. It helps protect roadbed and cut track maintenance. The Ride-Control Package makes it possible to apply this threeway protection to your present rolling stock.

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"UNION" I.T.C. is ready at *all times* to provide instant voice communication between crews on the head and rear end of the same train—between crews on passing trains—between train

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#### CURRENT RAILWAY STATISTICS

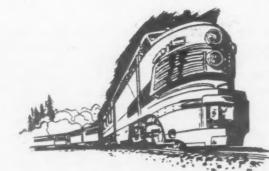
Operating revenues, eight month 1951	762,632,765
Operating expenses, eight months 1951	359,781,366
	752,009,833 551,181,004
	t months 513,636,133 556,537,130
	nths 326,000,000 372,000,000
Average price railroad stocks October 30, 1951 October 31, 1950	53.12 46.92
Car loadings, revenue freight 42 weeks, 1951	863,961 887,935
Average daily freight car surplus Week ended October 27, 1951 Week ended October 28, 1950	2,360 2,922
Average daily freight car shortag Week ended October 27, 1951 Week ended October 28, 1950	e 17,130 34,236
Freight cars delivered September 1951	8,533 5,131
Freight cars on order October 1, 1951 October 1, 1950	140,135 106,611
Freight cars held for repairs October 1, 1951 October 1, 1950	97,176 107,398
Net ton-miles per serviceable car August 1951 (preliminary) August 1950	
Average number railroad employe Mid-September 1951 Mid-September 1950	es 1,286,469 1,283,514

#### In This Issue . . .

OPPORTUNITIES: "There is tremendous room for improvement in the operation of the American railroads . . . in directing greater attention towards the development of a more skillful, better trained, and fully satisfied work force. . . . This could be accomplished by vigorous prosecution of a well-rounded personnel program, properly supported by top management." In these words the Western Pacific's President Whitman set the pitch of his particularly rewarding New York Railroad Club address, which appears in abridged form on page 81 herein.

THE LABORER IS WORTHY OF HIS HIRE: It isn't the usual thing to find in these pages a recommendation that the federal government should spend more money. But the federal government has embarked on a far-reaching venture in the regulation of agencies of transportation, of the railroads particularly. If the railroads are going to have to live under such a system of regulation—whether or not they can continue long to do so is, of course, another question—at least they are entitled, and their customers and the general public are entitled, to the best possible administration of the laws and policies establishing that system. As our leading editorial points out, appropriations for the Interstate Commerce Commission have been increasingly niggardly in recent years, in proportion to the work the commission's staff is given to do. The quality of its performance is bound to be affected. The railroads and their customers will benefit to the extent that they can persuade Congress to deal more liberally with the commission's morale problems and fiscal predicament.

FREIGHT TRAFFIC HIGHLIGHTS: Among this issue's feature articles: Practical measures effected by the railroads to save money and car-days, for themselves and for their customers, by "short routing" empty freight cars.—New Pittsburgh warehouse affording full protection for freight and efficient arrangements for transferring it between cars and delivery trucks—A "breakdown" of the freight tariff research program, by Charles S. Baxter, head of the railroads' recently established organization in that field.—A "progress report" summarizing the Chesapeake & Ohio's substantial accomplishments in the direction of tariff simplification.—A description of the operating technique by which the Burlington gives improved freight service between St. Louis and Kansas City and St. Joseph.



#### In Washington . . .

\$30 MILLION FOR EXPRESS AGENCY: To succeed the 20-cents-pershipment extra charge allowed the Railway Express Agency last May,

#### WEEK AT A GLANCE

the I.C.C. has put its O.K. on a general express-rate increase which figures out to about 10.8 per cent more annual revenue for the agency. Almost simultaneously, size and weight limits were reduced on parcel post shipments through large post offices. With such encouragement the agency is getting up steam to put on a vigorous selling campaign to recover some of its lost business.

NOTED IN THE NEWS: Western railroads authorized by the I. C. C. to discontinue most tourist sleeper services.—A. A. R. directors referred back to the general committee that made the proposal the recommendation for a \$2 per diem charge, mentioned here last week.—Mediation of "Non-ops" union-shop demands abandoned; arbitration proposed.— House committee warns Knudson against delegating authority, presumably to A. A. R.—Senator Murray criticises current railroad advertising giving carriers' views about unsettled labor disputes.

#### ... And Elsewhere

TWO MORE GRIFFIN PLANS: Louisville, Ky., and New Britain, Conn., are the locales for these most recent shipper efforts to do something about improving the quality of l.c.l. service. Both are "Griffin Plans." (The original Griffin Plan was described in Railway Age, September 3.) The one at Louisville is headed up by R. J. Tyler, general traffic manager of Tube Turns, Inc., and went into operation on October 24. The New Britain consolidating movement is headed up by J. M. Stuart, general traffic manager of the Stanley Works, Inc. New Britain routings, at the outset, will be the same as those set up by Mr. Griffin at Waterbury.

"UNICEL" ON THE HIGHWAYS TOO: Members of the American Trucking Associations, meeting in Chicago during the week of October 22, displayed considerable interest in the pilot model of the Pressed Steel Car Company's new "Unicel" highway trailer. Like its railway car counterpart, described in the October 14, 1950, Railway Age, page 24, the Unicel trailer may be used as a refrigerated unit or as a carrier of dead freight because its cellular laminated construction, rather than any applied material, supplies the needed insulation. The truckers are said to be particularly intrigued with this feature, because it could permit them to handle "reefer" loads in one direction and dead freight in the other with a single type of trailer. Pressed Steel has announced that in addition to the pilot refrigerated trailer on display, they have built an unrefrigerated version which has been in test service on freight runs up and down the east coast. It is performing, they say, "satisfactorily." Other features of the Unicel trailer are basically the same as those of the Unicel railway car.

ROADS OVER RAILS? The old idea of building express toll highways, probably limited to passenger automobiles, over railroad rights-of-way, seems to be coming to the front again in the New York area. It has, at least, been the subject of a number of recent press articles. Alexander Wilson, writing in the Commercial & Financial Chronicle, proposes that the railroads themselves build such elevated highways, advancing among other arguments the interesting propositions that the railroads could thus receive toll revenues from competition which they have to meet anyway, and that "railroad corporations could finance and manage elevated thruways more efficiently than local and state politicians."



THIS YEAR'S "GOLD OSCAR" for the best 1950 annual report of all industry has been awarded to the Erie by the magazine Financial World. Paul W. Johnston (above) president of the road, accepted the award at ceremonies in New York's Hotel Statler on October 29. More details about the award appear in the news section, page 16.

Plan

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is an ideal metho

## CLEAN BATTERIES LAST LONGER!

Because battery cleanliness prevents external current leakage and grounds, regularly scheduled cleaning is essential for maximum battery service. Information on proper battery maintenance is available to you through the GOULD PLUS-PERFORMANCE PLAN—a complete system of manuals, articles, specifications, bulletins, charts and graphs dealing with this and practically every other battery problem.

GOULD PLUS-PERFORMANCE PLAN material tells you and shows you how to select, charge and handle, maintain and determine the condition of your batteries . . . and it's FREE, without obligation! Use it and you can extend battery service as much as 50%! Send today for booklet explaining the plan.

#### HERE'S HOW TO CLEAN YOUR BATTERIES

As a general rule, diesel starting batteries should be washed every month at the time of inspection of the entire diesel, and the battery compartment cleaned and painted at the time of the annual inspection of the locomotive.

Batteries may be cleaned by steam, air, water or by wiping with cloths, being sure vent caps are in place and tight. If acid is present on the top, it should be neutralized using common baking soda or ammonia. When cleaning the top of the battery with neutralizing solution, take care that none enters the cells.

Terminals and connectors may be cleaned in the same way, after which they should be coated with battery grease or vaseline to prevent corrosion. Never scrape or use wire brush on lugs as scraping may damage the lead plating and expose the copper to corrosion. Use No. 00 sand paper or a suede brush for cleaning lug contact surfaces.

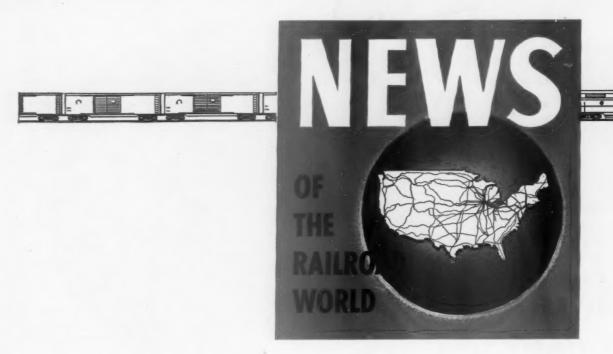


Gould "Z" Plate Batteries-America's Finest Diesel Starting Batteries

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Always Use Gould-National Automobile and Truck Batteries



#### Express Agency Gets \$30-Million Rate Increase

A general increase in rates and charges of the Railway Express Agency has been authorized by the Interstate Commerce Commission. Superseding the interim increase of 20 cents per shipment granted last May, the latest increases are expected to boost the agency's annual revenue by about \$30 million, or 10.8 per cent. The commission gave the agency authority to place the higher rates in effect on 15 days' notice.

The commission authorized the increases in an October 23 order, made public October 25. It was a 10-to-1 decision, with Commissioner Alldredge dissenting. Chairman Splawn, concurring in part," said he did not believe higher rates on articles of food and drink were justified, and Commissioner Knudson wrote a concurring opinion

#### "Nothing Constructive"

According to Commissioner Knudson, it is "high time" the I.C.C. did something different to save the agency. He declared the present decision may increase net intake, but will do "nothing more in a constructive way."

"In our judgment, the agency's anticipated losses in volume of movement will not be fully realized under the increases herein authorized, and we believe not less than 80 million less-carload shipments may reasonably be expected to be handled," the commission said. "If that judgment is confirmed by future events, the increases herein authorized should produce ad-

ditional revenue of approximately \$30 million."

The R.E.A. last January filed its petition for authority "to increase and revise" its rates and charges. (Railway Age, January 22, page 35). It subsequently asked for an interim increase of 25 cents per shipment and the commission authorized 20 cents. (Railway Age, April 23, page 37). A further interim increase of one-cent-per-shipment was requested but was denied.

#### **Details of Increase**

Under the present order, the agency is authorized to increase first-class rates by 30 cents a shipment for shipments under 100 pounds. Above 100 pounds, the increase will be 30 cents per hundred. A minimum charge of \$1.50 a shipment will apply.

Second-class rates and charges will be increased to continue them at 75 per cent of first-class. They are also subject to a \$1.50 minimum. Thirdclass rates will increase from 1.75 cents for the first two ounces to one cent per ounce, with a \$1.50 minimum.

On commodity rates, the boost is the same as authorized for first-class rates, except on articles of food and drink. The latter shipments will increase 22.5 cents on shipments under 100 pounds. Above 100, the boost is 22.5 cents per hundred. Again, the minimum charge is \$1.50 a shipment.

Other increases authorized include a boost of 25 per cent in C.O.D. service charges, and a similar increase on minimum charges of \$2.00 and over. The commission turned down a proposal that no minimum charge be less than \$2.00.

It also found the agency had not offered sufficient justification to warrant approval of a proposed scale of first and second-class charges in multiples of five pounds on shipments under 100 pounds, in lieu of the present method of publication in one-pound gradations.

Valuation charges of 11 cents are boosted to 15 cents, and all others are increased by 25 per cent. Specific charges on returned empty containers are upped 25 per cent, as are money classification rates and charges, except where such charges are determined by use of first-class rates. Money classification rates are subject to a \$1.50 minimum.

Commissioner Knudson concurred in granting these increases. He said, however, they will drive "an additional and substantial amount" of traffic from R.E.A., will handicap some shippers and dry up some traffic entirely. For the agency itself the higher rates "apparently will do nothing more" than increase net revenue, he said.

Mr. Knudson added that if the owning railroads were sincerely interested "in anything but their pro-rata shares in express privilege payments," they should long since have recalled and renovated the existing contract with R.E.A. "If the railroads do not intend to renew the contract they should say so now, so that the far-flung facilities of the agency can be put to a more justifiable economic use. It is a strange sight to see the passenger plat-

forms of many railroad terminals choked with parcel-post, the freight houses struggling to modernize and streamline their ability to handle l.c.l. traffic, and the express offices looking like ghost towns. There must be some way to rectify these inconsistencies, that can be discovered and applied by the collective minds of the agency and railroad management."

The commissioner then went on to says that one means "stands out boldly on the record — that of improving express services that have deteriorated to a confessedly handicapping degree."

If the carriers want the agency to survive, they must make the necessary contributions service-wise or

otherwise, he said.

#### Staley Urges Allowing Management to Manage

A sharp criticism of the Interstate Commerce Commission's administration of the "Fourth Section"—the so-called long and short haul section of the Interstate Commerce Act—has been made by J. R. Staley, vice-president of the Quaker Oats Company, and a member of the National Industrial Traffic League's committee on rates and tariffs, in a letter to other members of that committee.

The letter followed a proposal by A. M. Ribe, senior partner in a Birmingham (Ala.) firm serving as industrial traffic managers and consultants, and another member of the N.I.T.L. committee on rates and tariffs, that the I.C.C.'s authority to suspend general rate increases or de-

creases be taken away.

"Through the administration of the Fourth Section'," Mr. Staley continued, "the commission is consistently substituting its judgment for that of management in determination of what rates are reasonably compensatory. In hundreds of cases where carriers asked for 'Fourth Section' relief—cases in which they were vigorously supported by shippers and receivers of freight—the commission either denied relief or imposed such qualifica-

tions on the relief as to restrict its usefulness. Every one of these cases is an instance where the commission substituted its judgment for that of the railways.

. "I recently inquired about the number of clerks employed in the commission's section of tariffs, and at the Fourth Section Board. It might amaze many people to learn that the Fourth Section Board has almost exactly twice as many clerks and employees as are employed to deal with tariff

problems."

Turning to the I.C.C.'s power of suspension, Mr. Staley pointed out that the original idea of suspension was "to provide protection for shippers against changes which might be thought harmful." However, an analysis of recent requests for suspensions "shows an overwhelming majority are on behalf of railroads vs. trucks, or trucks vs. railroads, or water lines vs. railroads, or railroads vs. water lines. The number of requests on behalf of shippers is becoming more and more in the minority." He went on to suggest that "someone should make a real study of just what is going on in connection with the power of suspension."

#### N. J. Railroads Cannot Pay Cost to Bring Commuter Trains Into New York, Says Shoemaker

An October 23 statement by P. M. Shoemaker, vice-president-operation of the Delaware, Lackawanna & Western, concerning government participation in financing any program for bringing New Jersey commuters into New York by train, has been the subject of a variety of news reports and newspaper comments. The state-ment was made in the course of hearings before the New Jersey Board of Public Utility Commissioners and the Interstate Commerce Commission dealing with the pending application of New Jersey railroads for authority to increase commutation fares (Railway Age, July 16, page 34). It was occasioned specifically by testimony during the proceedings concerning the ambitious plan developed by L. Alfred Jenny for physically linking New Jersey railroads wi'h New York, one

version of which was described in detail in Railway Age, April 17, 1948, page 39.

Those parts of Mr. Shoemaker's statement having to do with state or federal participation in such a project follow, in his own words:

No railroad man, familiar with the operating details of a suburban commutation service, would attempt to deny that the handling of passengers between North Jersey and Manhattan, without having to contend with the river barrier, would be highly desirable from a passenger standpoint. Why haven't the railroads done this? In plain language, the railroads involved are not able, either individually or collectively, to finance such a scheme as is proposed, and if it ever comes about, it will have to come from a grant in aid by the federal or state

governments, or be worked out through

If and when access to and use of Manhattan facilities become so available, their use by the railroads must be on the basis of no greater cost to them than is presently involved in their ferry operations, and even that much is open to question. After all, whatever their service costs the railroads now, or whatever it may cost in the future through the use of a tunnel facility, must finally be borne by the users or, in lieu thereof, subsidized.

The problem, in plain language, comes down to a question of how such a project can be successfully worked out financially, not one of the details of how it can or cannot be accomplished engineering-wise. . . .

#### Problems Involved

All concerned with this problem must recognize certain important things, which include—

1. The commutation railroads have incurred steadily increasing deficits on their passenger operations. The seriousness of this has become more pronounced as spiraling wage and material costs have raised our break-even points, and rate increases have been inadequate to balance increased expenses.

2. The Interstate Commerce Commission, and to an increasing extent freight shippers, are properly complaining about the diversion of other revenue to meet passenger deficits.

3. The New Jersey railroad tax situation, penalizing New Jersey railroads substantially higher than is true in any other state in the nation, materially adds to the difficulty of New Jersey railroads finding means to continue present commutation service. The Lackawanna's New Jersey taxes, estimated at a little over \$2,800,000 in 1951, will compare with a suburban passenger train deficit, without considering a rate of return, of approximately \$2,900,000 for the same year.

4. Railroad management, the same as the management of any other utility, and business generally under the fundamentals of our capitalistic system, has the obligation to return net income to the property and provide reasonable dividends for stockholders.

5. Increase in population, additional highways and additional automobiles and trucks have reached the point where they are strangling metropolitan highway transit facilities, and students of the metropolitan situation, as a whole, generally agree with that premise of the Jenny report which indicates that there must be a return to railroad transportation and the development of the facilities to make it possible.

6. A recognition of present-day property values and construction costs indicates that new river crossings of the kind under discussion mean expenditures of a magnitude beyond the scope of the railroads involved to cover by themselves since their income

#### NEW SERVICES AND PUBLICATIONS OF INTEREST TO SHIPPERS

ASSOCIATION OF AMERICAN RAILROADS-Freight Claim Division-Bulletin No. 1110. Cautions proper bedding is the most important factor affecting live-stock losses. Recommends: "Straw as best bedding;" (2) a layer of sand underneath the bedding; (3) in cold weather stock cars should have sides lined to a height of four ft. or more; (4) employees at in transit stations should take special care, in winter, to avoid spillage in filling temporary watering troughs in cars; Freight Loading and Container Section-General Information Series No. 515, "Bonded Block Method of Loading Commodities in Cars or Glass in Fibreboard Containers." Recommends and describes three standard patterns which can be loaded in the three principal widths of cars used today. All sizes of rectangular (but not square) boxes can be formed into one of these patterns. Bonded block load is cutting damage by 75 per cent or more, says a release accompanying the pamphlet; General Information Series No. 516, "Recommended Methods for Loading and Bracing Plywood in Closed Cars." Principles involved in loading methods suggested "are to prevent or restrict the stocks of plywood from shifting both cross-wise and lengthwise in the box car during transit, and also to provide means for preventing a motion of the boards and overshifting of the sheets in the top layers." Copies of G.I.S. 515 and 516 are available.

BOSTON & MAINE—Two supplements to lists of merchandise cars issued recently cancel—or add—the following car lines:

Cancel:

Bellows Falls, Vt. to Newport Transfer, Vt., and St. Albans Transfer; Boston, Mass. to Biddeford, Me.; Aloans Iransjer; Boston, Mass. to Biddeford, Me.; Holyoke, Mass. to Spencer Tfr., N. C. (Southern); Lawrence, Mass. to Auburn, Me., Augusta, Baltimore, Md., Binghamton, N. Y., Chelsea, Mass., Hornell Tfr., N. Y. (Erie), Lewiston, Me., Lynn, Mass., Philadelphia Tfr., Pa. (Pennsylvania), Rockland, Me., Rutland, Vt., Salem, Mass., and Waterville, Me.; Mechanicville, N. Y. to Orange, Mass.

Gardner, Mass., to Springfield, Mass.—1 day; Lawrence, Mass., to White River Jct., Vt.—1 day; Man-

chester, N. H., to Mechanicville, N. Y. (D. & H.)-2nd day, and to Worcester, Mass. (N. H.—B. & M.)—1 day; Nashua, N. H., to Worcester, Mass. (N. H.—B. & M.). The B. & M. also has reissued its "Freight Train Symbol Book No. 54."

BESSEMER & LAKE ERIE-"Merchandise Loading Schedule," effective October 1, 1951. B. & L.E. schedule also gives train in which cars are forwarded.

CANADIAN PACIFIC—"Schedules of Fast Freight Trains," effective September 30.

CHICAGO & EASTERN ILLINOIS-The C. & E. I.'s "Freight Rate Streamliner" has been completely redesigned and revised to include all Ex Parte freight rate increases applicable to all traffic in all territories up to October 1.

CHICAGO & NORTHWESTERN-Announced removal of its Washington offices to the Wyatt building, 777 14th street, N.W., Washington 5, D. C.

CHICAGO, BURLINGTON & QUINCY-On October 1 opened a new district traffic office at Eugene, Ore. Address is 251 Tenth avenue east, phone Eugene 5-3291. W. W. Shott is commercial agent at the new office.

The Burlington Truck Lines, Inc., trucking subsidiary of the Burlington, has just received I. C. C. approval to add approximately 750 route miles of new service in Illinois. Service on the new routes will start soon.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC-The Milwaukee has been granted rights to operate rail substitute highway service between Chicago and Milwaukee and between Racine, Wisc., Janesville and Beloit. These routes, which will be operated by the Milwaukee Trans. port Company, are in addition to extensive highway auxiliary routes now in operation.

ERIE—Revised its freight train schedules: Train No. 100, the "Flying Saucer," Chicago to Jersey City now leaves Chicago at 8:00 p.m. and arrives Jersey City, 8:30 a.m., 2nd morning; train No. 99, the "Flying

is rate-wise beyond their own control, and without such control there is no apparent means of insuring adequate return.

In relation to the items above, the railroads have demonstrated, by their continuing to give commutation service to the extent that they have and do, that they have accepted the moral obligation to go as far, in protecting continuity of commutation transportation, as the economics of their respective situations permit.

Railroad management finds itself in this position: Regulatory authorities, as a generalization, have been un-sympathetic to the carriers' need for adequate income. With that philosophy prevailing, and with the continued attitude of the state of New Jersey in its railroad tax policy, it has been impossible for railroad management to do more than hold its own, let alone provide new equipment and facilities.

Because, under our private enterprise system, there seems to be no practicable, realistic way [for the railroads] to finance this situation, the solution seems to be one of the fol-

lowing:
1. The states of New Jersey and New York or the federal Government, by a new agency, or through an existing agency, to construct the river crossings and Manhattan stations; to underwrite such changes in equipment and cost of establishing connecting facilities as will be necessary for practicable operation, and to operate and support a terminal company for use by the interested New Jersey railroads connecting to it.

In the division of revenues between the terminal company and the rail-roads, a major premise to start with should be that the railroads would receive their full costs of operation in-

cluding taxes and a reasonable return.

2. The state of New Jersey to take over complete financial responsibility for New Jersey suburban passenger train service; the railroads involved to operate whatever service is deemed necessary as agents for the state. In other words, the railroads would operate their suburban passenger and commutation service on a cost plus basis, with all details of changed river crossings being worked out cooperatively by the railroads with the state of New Jersey and whatever other agency or agencies might be involved.

Of the two plans above, having in mind the broad economic problems involved, the desirability, from the standpoint of the state of New Jersey, of encouraging growth and development, and going beyond that, from the standpoint in the national interest of better integrating North Jersey with the New York metropolitan area, it appears that Plan No. 2, while more radical in nature, may well offer the best solution-but it would seem desirable that some qualified agency give consideration to which of the foregoing two suggestions would be preferable and how the program favored by it might be progressed in order that it may become a reality.

Saucer" westbound now leaves Jersey City, 8:30 p.m. and arrives Chicago, 3:00 a.m., 2nd morning; train No. R. C .- 98, Meadville, Pa. to Rochester, leaves Meadville at same time as before but departs Buffalo at 1:45 a.m. and arrives at Rochester at 6:15 a.m.; Trains No. X.C.-91 and 91, Maybrook, N. Y., to Chicago, now leave Maybrook at 9:30 a.m. instead of 8:45 a.m. and carry that 45 min. on the schedule to Marion, O. At Marion the old schedule is picked up, No. 91 leaving at 1:00 p.m. and arriving Chicago at 1:00 a.m. as before; train No. 87, Croxton, N. J. to Buffalo, scheduled lengthened to 30 min. Now leaves 11:30 p.m. instead of 10:30 p.m., but arrives Buffalo at 5:30 p.m. instead of 4:00 p.m.; train No. X.C.-99, Maybrook to Port Jervis, carrying connecting cars from New Haven train B.O.-3 for the "Flying Saucer," leaves Maybrook at 10:30 p.m. instead of 9:30 p.m.; train No. 272, Marion, Ohio, to Youngstown, now departs Marion 12:15 p.m. instead of 6:45 p.m., arriving Youngstown at 10:00 p.m.; train R.C.-98, Buffalo to Rochester, now leaves Buffalo 1:45 a.m. instead of 1:15 a.m., arriving 6:15 a.m. rather than 5:15 a.m.

GULF, MOBILE & OHIO—At Chicago all I.c.I. and forwarder operations have been moved to a new freight-house at 38th and California streets. House is equipped with new fork lift trucks.

ILLINOIS CENTRAL—Opened a new traffic office in Savannah, Ga. Address is room 1211, Savannah Bank & Trust Bldg., phone 3-5614. E. W. King is general agent.

KANSAS CITY SOUTHERN—"L.C.L. Service Directory No. 2" now available.

LOUISVILLE & NASHVILLE—Has scheduled a new package car direct from St. Louis to Florence, Ala.

MAINE CENTRAL—Has just issued "Freight Train Symbol Book No. 32."

NEW YORK CENTRAL—Has made the following changes in its package car schedules—
Cancel:

Louisville, Ky. to Toledo, Ohio; Cleveland, O. to Mil-

waukee, Wis. (C.M.St.P.&P.); Troy, N. Y. to New York, 33rd St. ("Pacemaker"); Cleveland to Atlanta, Ga. (L. & N.); Cleveland to Sharon, Pa.; Milwaukee, Wis. (C. & N. W.) to Utica, N. Y.; Kenosha, Wis. (C. & N. W.) to Utica; Milwaukee (C. M. St. P. & P.) to Utica; Galewood, Ill. (C. M. St. P. & P.) to Utica; Burr Oak, Ill. (C. R. I. & P.) to Utica; Galesburg, Ill. (C. B. & Q.) to Utica; Utica to Kansas City (C. R. I. & P.), and to Springfield, O. ("Pacemaker"); Schiller Park, Ill. (Soo) to Utica; Cleveland, O. to Clearfield, Pa. (tri-weekly), and to Newberry, Jct., Pa. (tri-weekly).

Add:
Louisville, Ky. to Detroit, Mich.; Albany, N. Y. to Jersey City, N. J.; substituted truck service between Cleveland and Elyria, O.; Cleveland to Clearfield, Pa. Newberry Jct. (2 station car), and to Galewood, Ill. (C. M. St. P. & P.); Milwaukee, Wis. (C. & N. W.) to Niagara Falls, N. Y.; Kenosha, Wis. (C. & N. W.) to Niagara Falls; Milwaukee, Wis. (C. M. St. P. & P.) to Niagara Falls, N. Y.; Galewood, Ill. (C. M. St. P. & P.), Burr Oak, Ill. (C. R. I. & P.), and Galesburg, Ill. (C. B. & Q.) to Buffalo, N. Y.

NEW YORK, NEW HAVEN & HARTFORD—Has just reissued its "Freight Train and Package Car Schedules," dated September 30. Some changes in the train schedules are announced, other than those normal when change is made from Daylight Saving Time. Some additions and deletions have been made in listing of arranged package

PENNSYLVANIA—"Loss and Damage Prevention Bulletin No. 27" calls to attention of the railroad's agents the Peyton "spur cleat" as a means of preventing shifting of freight. While useful in l.c.l. cars, there also "is a cleat for use in protecting every type of carload shipment." Contains illustrations of three models of cleats and gives instructions for application and removal so cleat may be used again.

READING—The October issue of the Reading's "Industrial News Bulletin" announces availability of 20 industrial sites in Pennsylvania and Delaware locations.

SOUTHERN PACIFIC—Has just taken delivery of 30 road diesel units for freight service on its Pacific lines.

#### I.C.C. Lets Western Roads Discontinue Tourist Fares

The Interstate Commerce Commission has found just and reasonable suspended tariffs whereby western railroads propose to cancel most of their so-called intermediate-class fares which have been good for travel in tourist sleeping cars. The report, by the commission's Division 2, noted that the Chicago, Milwaukee, St. Paul & Pacific, the Northern Pacific, and the Minneapolis, St. Paul & Sault Ste. Marie "do not propose to cancel the intermediate-class fares published over their lines from and to points west of St. Paul and Duluth."

The cancellation tariffs have been suspended since January 1. The commission's orders vacated the suspension as of November 8 and discontinued the proceeding which was docketed as I. & S. No. 5883. The Secretary of the Army was a protestant, his concern having been the resultant in-

crease in fares for movement of military personnel.

The fares to be canceled are based on a one-way rate of three cents per mile, as compared with the first-class rate of 3.5 cents for travel in regular sleeping cars. They are not published generally for unrestricted travel throughout western territory, but have limited application there.

In reaching its decision to authorize cancellation, the commission reviewed evidence indicating that demand for tourist-sleeper service "has diminished greatly." In December 1950, the railroad parties to the proceeding were operating only seven regular tourist-car lines, as compared with the 59 operated in 1946.

#### House Group Warns D.T.A. On "Transfer of Authority"

An admonition to Defense Transport Administrator Knudson that "no function delegated to you under the

Defense Production Act be transferred to any private person or organization" was contained in a report made public last week by the House Monopoly Subcommittee.

The report is based on last summer's hearings on monopoly tendencies in the mobilization program. They were conducted by the subcommittee, headed by Representative Celler, Democrat of New York.

The conclusion that Mr. Knudson should not transfer functions "to any private person or organization" was apparently a slap at some of D.T.A.'s work with the Car Service Division of the Association of American Railroads.

Reference was made to a letter which Mr. Knudson sent last January to Chairman A. H. Gass of the Car Service Division. It was at the time of the "sickness" strike of the Brotherhood of Railroad Trainmen, and Mr. Knudson asked Mr. Gass to instruct railroads affected to embargo traffic.

During hearings before the subcom-

mittee Mr. Knudson defended use of this "directive" as D.T.A.'s way of getting its job done "with as much freedom from government edict and control as we possibly can." The subcommittee, however, said it is "highly questionable" whether economic freedom is promoted by having the A.A.R. direct the railroads in their activities instead of D.T.A.

Mr. Knudson also referred the subcommittee to Interstate Commerce Commission Service Order No. 866, which appoints Mr. Gass "agent" with authority to issue orders governing freight car distribution. The subcommittee report said this delegation "would appear to exceed" Interstate Commerce Act

authority.

"But in any event, the D.T.A. was set up under the Defense Production which does not authorize any agency to delegate governmental power to private persons," the report con-tinued. A defense agency has no permission "to abrogate its functions" and delegate to the A.A.R. or any other private group the power to issue

orders or regulations.

Other conclusions reached by the subcommittee included a recommendation that D.T.A. utilize industry advisory committees "pursuant to the Defense Production Act in preference to all other consultative bodies." subcommittee previously had been critical of D.T.A.'s use of an advisory committee headed by Caleb R. Megee, vice-chairman of the Car Service Division. (Railway Age, June 18, page 58.)

The subcommittee also recommended that D.T.A. not encourage the formation of "industry committees" in industries under its jurisdiction, and sug-gested that "all requests for voluntary adherence to comprehensive codes" be cleared with the Attorney General.

#### Erie Receives "Gold Oscar" For Its 1950 Annual Report

The "Gold Oscar" sponsored by Financial World magazine for the best 1950 annual report of all industry was awarded to the Erie on October 29 at the annual awards dinner in the Hotel Statler, New York. More than 5,-000 annual reports, representing most industries in this country and Canada, were judged in the survey. The jury which made the final selections included Carmen Blough, research director of the American Institute of Accountants; Pierre R. Bretey, president of the National Federation of Financial Analysts; Elmer Walzer, financial editor of the United Press; Denny Griswold, publisher of Public Relations News; and Guy Fry, past president of the National Society of Art Directors.

"It is especially gratifying to receive this fine recognition during our centennial year, when we are commemorating a century of progress and development," Paul W. Johnston, Erie president, said in his acceptance address. "Many aspects of the Erie have been honored this year and it gives me pleasure to see our relations with shareholders recognized through the awarding of this Gold Oscar-for an annual report reflects a company's attitude toward those who have invested their funds in the property. ... It serves to answer the spoken and unspoken questions of shareholders and may even tell them some things they have not thought of seriously enough when they invested their hardearned dollars in the business.

Railroad management, Mr. Johnston continued, "is particularly conscious of the need for keeping its shareholders informed because ours is an industry subject to governmental regulation in regard to rates and many other matters affecting the return on shareholders' investment. It is an unfortunate fact that the earning power of railroads for many years has been so restricted through governmental regulation that there have been virtually no new issues of stock offered for sale during the past 15 years. Since 1936, new issues of railroad stock have to-taled only about \$1,000,000 while more than \$6,000,000,000 of new issues of railroad bonds were marketed. The lack of sufficient earnings make it necessary for railroads to turn to debt financing to enable the industry to modernize and keep pace with the nation's industrial and military needs."

Business management, the Erie officer pointed out, has occasionally been guilty of gross neglect of the man who provides the capital on which it operates. "It sometimes hap-pens," he said, "that once an enterprise gets under way and the immediate need for capital is not so imminent, the shareholder all too frequently is relegated to the role of 'the forgotten man.' Great attention has been paid in recent years to the comparatively new concept of labor relations, of labor's right to improved working conditions and improved standards of

"This is as it should be, of course. But at the same time we should not lose sight of the shareholders' rights and prerogatives as owners of the company entitled to consideration in formation of management's policies as well as a share in the profits. Nothing can take the place of good earnings and a fair dividend policy in satisfying the individual shareholder, but a carefully prepared report can, and must, present all factors entering into the results. If the company has been successful, shareholders should know



ERIE'S TERRITORY, a colorful spread in the road's annual report for 1950, which won this year's "Gold Oscar"

in detail what has made it so. If the future looks bright or dim, they should know that also. In each case, precise reasons should be given rather than a

generalized statement."

"In recent years the dire possibility of nationalization of American railroads several times has reached an acute stage. . . . But the philosophy of state control is not limited to railroads. It extends, as in Great Britain, to other huge segments of the economy, particularly public service industries and those concerned with raw or basic materials. American business owners must be increasingly and continually aware of this threat of nationalization. And management must carry to the owners, or shareholders, at every opportunity the reminder that private ownership of business and industry is essential to individual freedom."

A bronze "Oscar" for the best 1950

annual report among railroad equipment manufacturers was presented to the American Brake Shoe Company. Maurice N. Trainer, president of the

firm, accepted the award.

#### \$2 Per Diem Proposal Sent Back to Committee

The board of directors of the Association of American Railroads has referred the proposal to increase the per diem rate from \$1.75 to \$2 back to the general committee of the association's Operating-Transportation Division. The increase has been recommended by that committee.

The directors' action was taken at

their October 26 meeting in Washington, D. C. It is understood to have been based on the board's desire to have the committee's report include an expression of its views on the so-called scale and dual plans for making per

diem payments. The scale plan contemplates per diem rates varying with ages of cars involved. The dual plan contemplates a rate based on car-mileage and time

factors.

#### Murray Calls Carrier Ad "Unwise and Unwarranted"

A railroad advertisement on the pending "op" dispute, which appeared in daily newspapers October 29, has been criticized as "unwise and unwarranted" by Senator Murray, Democrat

of Montana.

Senator Murray is chairman of the Senate committee which earlier this year conducted lengthy hearings on the dispute between the carriers and the Brotherhood of Railroad Trainmen, the Brotherhood of Locomotive Engineers, Brotherhood of Locomotive Firemen and Enginemen, and Order of Railway Conductors. The B. R. T. has since settled.

"The record developed before my committee does not bear out some of the statements made (in the railroad Senator Murray declared.

"It is difficult to believe that the publication of controversial advertisements

#### SHIPPERS BOARDS ASK CONSIGNEES' HELP IN DAMAGE PREVENTION

A. H. Schwietert, chairman of the 1951 Perfect Shipping Campaign of the National Management Committee of the National Association of Shippers Advisory Boards, recently issued a little brochure, entitled "Pieces of Eight," in which he asks for more support from receivers of freight in the campaign for better shipping. The consignee, Mr. Schwietert says, is the first one to lose by damage. He also sees that some shippers do a packaging job that gets the freight through undamaged, while other suppliers don't do as well. Mr. Schwietert suggests a program for receivers that will pay off in "better business relationships" and "good solid doubloons":

"1. Alert your receiving department to inspect carefully the condition of goods received from all shippers;

'2. Keep a record of all goods received in unsalable condition;

'3. When articles arrive repeatedly in damaged condition, notify the shipper in each instance, giving him full details of the nature and extent of damage and its apparent cause. It would help if you took a close-up snap-shot to show exactly how the package failed to protect the contents so the shipper can determine what changes in his packing material or methods may be necessary;

"4. Describe to him how similar or comparable articles are packed successfully by other shippers."

An illustration from Mr. Schwietert's brochure on better shipping



by the carriers at this time was designed to further complicate an already complex situation, but it would seem that the action brings this result and was both unwise and unwarranted, the senator said.

The advertisement to which the senator referred was sponsored by Eastern, Southeastern and Western railroads. It called on the thee "op" leaders to "end this quibbling" and settle the dis-

It said unions representing more than 90 per cent of all railroad employees have accepted similar wage and rules agreements, but leaders of he three operating brotherhoods continue a course of dillying and dalthe lying."

Senator Murray's statement said the three brotherhoods "Lave proposed that the entire controversy be arbitrated under the provisions of the Railway Labor Act." It added that the It added that the carriers "have refused this proposal," and said they insist they will arbitrate only their proposed changes in work-

The railroad position, as set out in th eadvertisement, is that the carriers are willing to settle on the basis of the so-called Memorandum of Agreement signed at the White House December

The brotherhoods subsequently repudiated this agreement, although the B. R. T. later settled on the basis of this agreement.

Most recent development in the case, with respect to the remaining three unions, came on October 24 when the

B.L.F.&E. announced it had mailed strike instructions to its members. (Railway Age, October 29, page 18.)

#### Draper Resigns as Long Island Trustee

The resignation of William H. Draper, Jr., as trustee of the Long Island was accepted on October 30 by Judge Harold M. Kennedy in the United States District Court, Brooklyn, N. Y. Mr. Draper had been trustee since December 22, 1950, when he succeeded Hunter L. Delatour and David E. Smucker.

Mr. Draper suggested to Judge Kennedy that his successor as trustee be William Wyer, senior partner of William Wyer & Co., consulting engineers, and former chief executive officer of the Central of New Jersey. A hearing on the proposal is to be held before Judge

Kennedy on November 5.

The resignation was submitted, Mr. Draper said in a letter to Judge Kennedy, to enable him to devote all his time to his post as chairman of the Long Island Transit Authority. conflicts have arisen, so far as I know, between my duties as trustee and my duties as chairman of the transit authority," the letter said in part. However, it continued, officers of the Pennsylvania, "when approached recently, took the position, on advice of counsel, that they should not negotiate concerning a possible reorganization with the members of the authority so long as I was also the trustee. I have no real quarrel with this position, particularly as I had already intended to resign about now in order to devote my full time to the authority problems during the next few months."

#### A.A.R. Member Roads Meet November 16

The annual meeting of member roads of the Association of American Railroads will be held at the Blackstone Hotel, Chicago, on November 16. It will be preceded on November 15 by a meeting of the association's board of directors.

#### Canadian RRs Amend April 23 Rate Request

The Railway Association of Canada has asked the Board of Transport Commissioners to authorize a general increase in freight rates of 17 per cent without exceptions, except on coal and coke, or, as an alternative, for a general increase of 18 per cent with specified exceptions. Such increase would be in lieu of the interim increase of 12 per cent authorized earlier this year (Railway Age, July 9, page 69), which prevails pending final disposition of the railroads' April 23 request for an increase of 14 per cent without exceptions, except for coal and coke, or, alternatively, 15 per cent with exceptions (Railway Age, April 30, page 39).

#### More Opposition to Explosives Trucking

The 60 motor carriers seeking to haul explosives on public highways (Railway Age, October 1, page 89) are finding opposition to their scheme mounting on every side.

mounting on every side.

The states of New Jersey, Pennsylvania and Delaware have taken steps to intervene before the Interstate Commerce Commission's Chicago hearings in MC-200 Sub No. 84, Riss & Co., the "trial balloon" case on which most of the 59 other applicants' cases are to be based. The city of St. Louis, Mo., has also announced its intention to oppose the applications on the grounds that general highway explosives transport would constitute extreme danger to life and property. Still more opposition is coming from the American Automobile Association whose board of directors recently passed a resolution "to oppose the granting of each and every application for permanent authority to transport explosives and related dangerous material by highway" following similar action taken by the members at their Kansas City convention on October 23-25.

The hearings were resumed in Chicago on October 22. Counsel for all parties present agreed that Riss & Co. should complete presentation of its case—a matter expected to take a week or ten days, that the protestants (in order mutually agreed upon for reasons of time and convenience)

would thereafter present their evidence in the Riss case and that this evidence will apply to all subsequent cases.

All railroad brotherhoods (except the Brotherhood of Railway Clerks) are expected to oppose the applica-

Heartbalm for the truckers came from Secretary of the Navy Dan A. Kinall last week when he spoke before the regular common carrier conference during the American Trucking Association's convention in Chicago. He termed the trucking of explosives a "military necessity" and said that it could be hauled as safely by motor carriers as "by any other means." He cited instances where "emergency" transport of ammunition for Korea earned a "well done" for the truckers from the Navy and where a rail strike had interfered with military exercises until aviation gas in large quantities was moved to the scene in trucks.

#### William Reid to Address New York Railroad Club

William Reid, president of the Hudson & Manhattan, will be principal speaker at the November 15 meeting of the New York Railroad Club. His subject will be "Transportation in Metropolitan New York." Discussion will be led by Perry M. Shoemaker, president of the club and vicepresident — operation of the Delaware, Lackawanna & Western, and by William Draper, chairman of the Long Island Transit Authority. The burden of the meeting will be a continuation of the discussion—already reported in part in Railway Age—of the pouring of public funds into highway transportation and the impoverishment of mass carriers by rail.

#### R.E.A. Officers Discuss Expected Business Increase

Operating vice-presidents of the Railway Express Agency began a series of conferences on October 31 which were scheduled to continue for the next ten days at the company head-quarters in New York, according to A. L. Hammell, R.E.A. president.

The meetings were designed to re view present operations, facilities and manpower of the company in preparation for an expected increase in volume of express business in 1952. Recent legislation passed by congress limiting size and weight of parcel post shipments handled by first class post offices offers the opportunity for the express agency to regain some of the business loss to parcel post service in the last six years, Mr. Hammell said. "We want to be certain every detail of our operation is in smooth and perfect working order so we can handle the additional business with the high standards of speed and safety for which express service has been favorably known for many years."

An intensified sales program calling

for sales meetings of express employes throughout the country which are to be addressed by Mr. Hammell, Traffic Vice-President K. N. Merritt and other executives, is being planned and was scheduled for discussion at the conferences.

#### Freight Car Loadings

Loadings of revenue freight in the week ended October 27 totaled 863,-961 cars, the Association of American Railroads announced on November 1. This was a decrease of 22,687 cars, or 2.6 per cent, compared with the previous week; a decrease of 23,974 cars, or 2.7 per cent, compared with the corresponding week last year; and an increase of 272,646 cars, or 46.1 per cent, compared with the equivalent 1949 week.

Loadings of revenue freight for the week ended October 20 totaled 886,648 cars; the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

REVENUE I	PEIGHT C	AR LOADIN	GS
For the week	anded Satu		
District	1951	1950	1949
Eastern	147,229	153,852	113,421
Allegheny	173,332	175,016	90,620
Pocahontas	66,197	67,801	19,931
Southern	138,795	134,250	104,438
Northwestern	144,371	146,038	81,827
Central Western	148,427	147,311	130,401
Southwestern	68,297	66,962	48,450
Total Western	-		
Districts	361,095	360,311	260,678
Total All Roads	886,648	891,230	589,088
Commodities:			
Grain and grain		F0 0/7	F7 2 40
products	57,380	59,967	57,349
Livestock	18,517	16,688	19,092 52,482
Coal	164,620	165,667	3,909
Coke	15,507	16,422	40,781
Forest products.	48,514	47,296 71,665	6,832
Ore	78,495	88,707	88,341
Merchandise I.c.I.	75,831	424,818	320,302
Miscellaneous	427,784	444,010	320,302
October 20	886,648	891,230	589,088
October 13	868,683	888,889	583,948
October 6	858,750	863,903	574,228
September 29	864,573	880,186	658,128
September 22	864,310	870,529	661,468
		4	

Cumulative total 42 weeks ...32,956,329 31,142,881 29,560,242 TI

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In Canada.—Carloadings for the week ended October 20 totaled 89,161 cars, compared with 81,783 cars for the previous week, and 92,674 cars, for the corresponding week last year, according to the Dominion Bureau of Statistics:

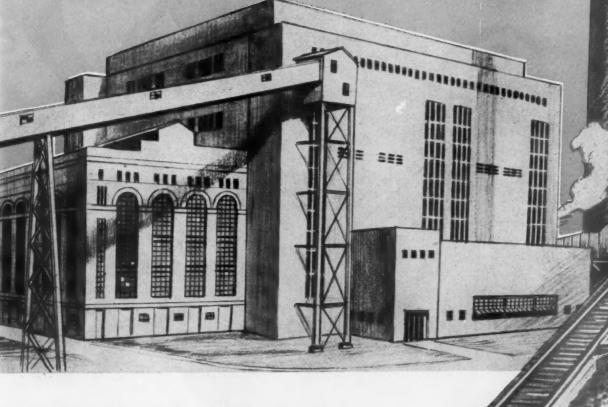
Statistics:	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada: October 20, 1951 October 21, 1950	89,161 92,674	34,612 35,296
October 20, 1951 October 21, 1950	anada: 3,371,415	1,452,188 1,307,466

#### MORE NEWS ON PAGE 91

Additional general news appears on page 91, followed by regular news departments, which begin on the following pages:

Supply Trade	. 92
Equipment & Supplies	. 92
Financial	. 96
Railway Officers	. 98
Organizations	. 114

## COAL Moves-EFFICIENTLY.. DEPENDABLY OVER Coast Line



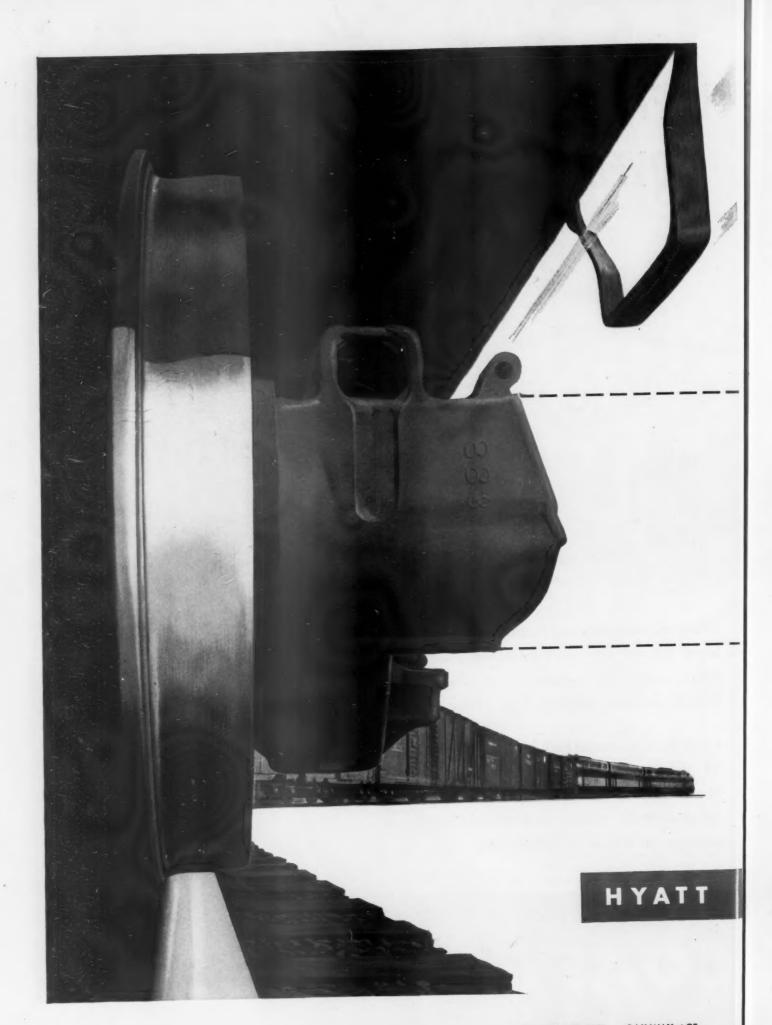
THANKS to progressive management and a high degree of mechanization, America's bituminous coal industry is producing at a higher-per-man-output than ever before.

Coast Line is a vital link in the transportation of this basic and urgently needed fuel Modern facilities and expeditious handling safeguard the steady flow of this important tonnage to a host of industries.

ATLANTIC

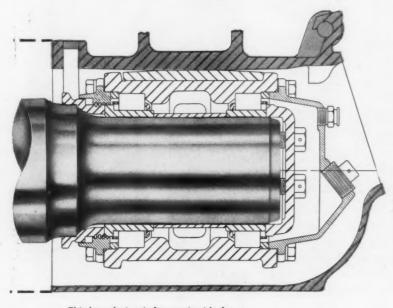
COAST LINE

RAILROAD



## ROLLER BEARING JOURNAL BOXES for freight cars

Incorporating features so successful on passenger cars and diesel locomotives



This box design is for use in side frames having integrally cast journal box housings.

Also available, another design for pedestal-type side frames, Hyatt Freight Car Journal Boxes are designed for grease lubrication and will operate for long periods between inspections.

Most modern railroads know, from their own experiences, how well Hyatt Roller Bearing Journal Boxes have performed on passenger cars and diesel locomotives for the past quarter of a century.

Many Hyatt Journal Boxes have operated successfully for millions of miles. And now Hyatt offers a new roller bearing journal box, specially designed for **freight** cars.

This new journal box embodies the principal features of the Hyatt boxes which have won favor with the leading railroads from coast to coast.

Free lateral, a unique Hyatt design advantage, allows freedom of axle movement through the bearing, thus cushioning shocks, minimizing wear on wheels and truck parts, and insuring against damage to lading.

No press fits to break when removing boxes for inspection.

Reduced inventory is possible because spare axles and wheels need to be fitted with only inner races and spacer and thrust rings. The cost of stand-by spares is also substantially reduced.

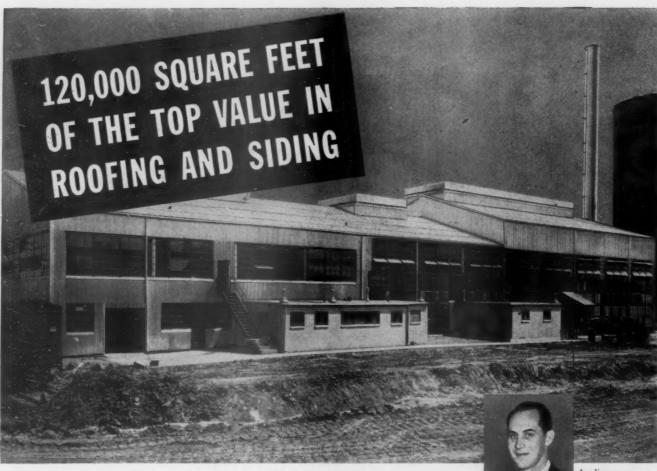
Straight radial rollers of generous size provide for maximum load-carrying capacity and longer usable life.

Simplicity of designpermits examination of all box and bearing parts with utmost freedom.

Railroad men, seeking to reduce operating and maintenance costs, eliminate delays due to hot boxes, minimize damage to ladings, and schedule freight cars at passenger car speeds, should get full information about the new "Hyatts for freight." Hyatt Bearings Division, General Motors Corporation, Harrison, N. J.

ROLLER BEARING JOURNAL BOXES

for freight cars



The Thatcher Glass Company plant at Lawrenceburg, Indiana, called for 120,000 sq. ft. of roofing and siding. The owners and their architects, Herman and Associates, Cincinnati, liked the idea of aluminum. They knew its lighter weight (56 lbs. per square) would save on framing. They knew this rustproof, corrosion-resistant metal would need no painting—practically eliminate maintenance. And aluminum's heat reflectivity would make the buildings cooler in summer, warmer in winter.

M. W. Nabakowski, Amherst, Ohio, roofing and siding applicator, has this to say: "Reynolds Industrial Corrugated is an ideal material because the finished job has eye-appeal, workmen like to handle it, and application costs are easily controlled." But the best testimonial will be written through the years, in superior performance and maintenance economy. It's the top value you want in your next construction. Call on Reynolds for literature, technical assistance and application details.

Offices in principal cities. Check your classified phone book for our listing under "Building Materials," or write: Reynolds Metals Company, Building Products Division, 2005 South Ninth Street, Louisville 1, Ky.



Specifications for Reynolds Lifetime Aluminum Industrial Corrugated:

Thickness .032"
Corrugations 7/8" deep, 2-2/3" crown to crown

Uniform load support (roof) 80 p.s.f. on 4' purlin spacing Uniform wind load capacity (siding) 20

PROCESS OF THE PROCES

Aluminum is required for planes and other military needs. Reynolds Lifetime Aluminum Industrial Corrugated is still produced, but the total supply is necessarily reduced. Rated orders receive priority handling.





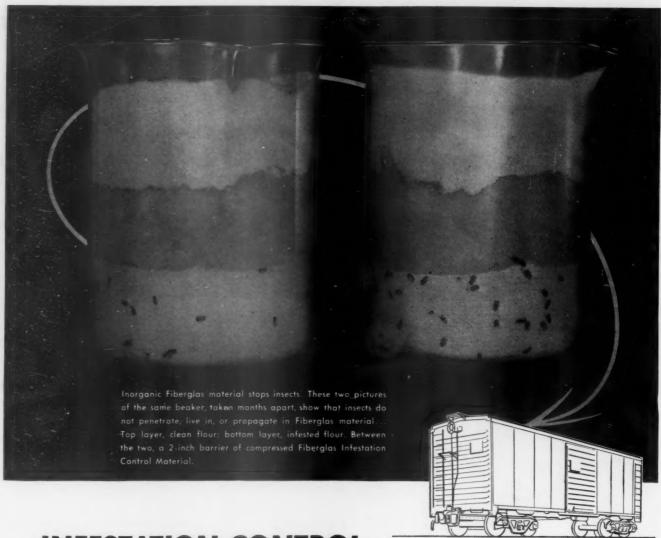
You can take the weight off fragile ladings with the Evans DF Loader—the Damage Free, Dunnage Free Loader. No longer need lower lading suffer serious crushing—no longer need cars be loaded light to prevent damage. Rugged cross bars lock in the load, hold sturdy deckboards in countless combinations. Fruit crates, heavy cartons, flimsy "bundles"—all can be solidly supported in multiple layers.

In shipment after shipment the Evans DF Loader is cutting damage to "negligible," while increasing loads by as much as 200%. Because it eliminates dunnage, shippers save an average of \$46.50 on every load. Railroads save up to \$100 and even more in damage on fragile ladings—plus repairs to honeycombed floors and walls. To put an end to the cost of excessive damage, use box cars equipped with the Evans DF Loader—the Damage Free, Dunnage Free Loader. Evans Products Company, Railroad Loading & Equipment Division, General Offices: Plymouth, Michigan. Plants: Plymouth, Mich.; Coos Bay, Ore.; Vancouver, B. C.



LOADING AND RAILROAD EQUIPMENT
RETURNS REVENUE TO THE RAILS





#### INFESTATION CONTROL...

#### from Beaker to Box Car

It is now possible to treat a boxcar so that it will not harbor insects or larvae behind the linings—so that it cannot contribute to infestation of grain or milled products. Now, after several years of "beaker to boxcar" testing—several years of laboratory test, field trial and proof—the Bishop System has emerged . . . the permanent, simple, low-cost answer.

The ends of boxcars, with their deep corrugations, as well as the area back of the liners of the car sides, are the major sources of infestation. Here dusts of every conceivable kind collect. Here, in this dust, insects breed. Even cars with so-called self-cleaning

sides accumulate these same dusts as well and should be Bishop protected.

The Bishop System controls the infestation problem because it specifies installation of this Fiberglas\* material in the entire area and space behind the liners. This prevents infiltration, and filling of this space with dust.

Thus through relatively simple car construction this very troublesome problem is controlled.

For information, contact Gustin-Bacon Mfg. Co., Kansas City 7, Mo. Or Transportation Division, Dept. 21-K2, Owens-Corning Fiberglas Corporation, Toledo 1, Ohio.



... IN YOUR LIFE ... FOR GOOD!

\*Fiberglas is the trade-mark (Reg. U. S. Pat. Off.) of the Owens-Corning Fiberglas Corporation for a variety of products made of or with fibers of glass.

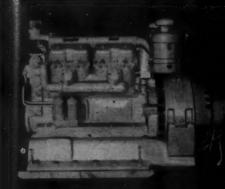
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10 MO

YOUR TRACTION GENERATOR



## Tailored to fit

THE "Caterpillar" Diesels you order for your rail cars are designed to fit your present electrical equipment—to match the speed and power of your traction generator—to work smoothly.

Caterpillar Tractor Co. will mount, couple, and align your original traction generator at the factory, where the complete unit will be dynamometer tested, then painted and shipped to you. Or, if you prefer, the engine will be shipped to you, with husky base and generator supports, so that you may mount the traction generator.

"Caterpillar" Railroad Diesels have these plus features:

- Readily accessible air, oil, water and exhaust connections.
- 2. Air or electric starting system, as desired.
- 3. Large lubricating oil capacity for 1,500 hourmeter hours of operation between oil changes.
- 4. Large access doors on both sides of crankcase.

#### LOOK UNDER THE HIDE



Filters are the watchmen of an engine's lubricating oil system. That's why "Caterpillar" filter elements are engineered and manufactured to extremely strict standards. They remove harmful particles as small as 39-millionths of an inch... remove sludge... have large filtering area and high flow rate... do not remove beneficial additives... are vibration-proof and waterproof. Look under the hide for quality—you'll find it in every "Caterpillar" detail.

YOUR RAILCAR



C.B.&Q. RAIL CAR operating between Beardstown and Herrin, Ill. Powered by a "Cat" D375 (illustrated in headline panel).

CATERPILLAR TRACTOR CO. . PEORIA, ILLINOIS

CATERPILLAR Railroad Diesels

10 MODELS OF "CATERPILLAR" RAILROAD DIESELS UP TO 500 HP.



J. R. STALEY

## We asked for your tariff NOW LET'S GET



YOU came through with a bang when we asked for your comments to help us attack the tariff complexity problem. You have helped us formulate a program and now we are ready to embark on the specifics of tariff simplification.

REGULAR USERS of railroad freight tariffs — we ask your help!

The project is this: we are searching for the type and style of tariff, and reforms in technical provisions which, when uniformly adopted, will enable you to determine rates faster and with greater accuracy. Our detailed program on the opposite page shows that we will make individual studies of the bits and pieces of the tariff structure. We will treat with form and substance.

HERE'S WHAT WE WANT YOU TO DO: Pick out the elements which to you are most important in achieving our objective of tariff simplification, and tell us exactly what you think should be done. We want your suggestions — and your preferences — and your pet peeves. Let's get down to cases . . . be specific. Use the program on the facing page as a check list and reminder of the many, many problems facing all of us in this important job of tariff simplification.

Write as often as you like — about one or more of the items listed or any other that comes to your attention — there's no limit to the number of suggestions we want from you.

#### Railroads' Tariff Research Group

Charles S. Baxter, Chairman

Harry F. Sutter George W. Lupton, Jr.

810 Transportation Building, Washington 6, D. C.

J. F. COYLE

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5. F a. typ b.

#### gripes—and we got 'em but plenty! DOWN TO CASES

#### THE PROGRAM FOR FREIGHT TARIFF RESEARCH

#### TARIFFS IN GENERAL

1. Standardization of title Standardization of title page
 a. Matter to be included b. Arrangement of matter c. Description of application d. A system of numbering e. Issuing officer or agent—single vs. multiple

2. Table of contents

3. List of participating carriers
a. Use of standard abbreviations of railroad names
vs. full corporate names
b. Need "extent of participation" be shown?
c. Do numbers of concurrences and powers of attorney serve any needful or useful purpose? If so, is there a shortened or streamlined method by which the need could adequately be served?
d. Will simplicity be gained or promoted by a code of numbers in lieu of carrier names or abbreviations?
e. Powers of attorney and concurrences to bureaus instead of agents
4. Subject matter preceding 3. List of participating car-

Subject matter preceding rate sections
 a. Index of commodities
 b. Index of rules
 General application
 d. Exceptions to general application

plication
e. General rules
f. Definitions
g. Common or usual provi-

s. stons
h. Reference to other tariffs
h. I.C.C. service orders
j. Explanation of obbreviations and reference marks
k. Reference to I.C.C. orders
and special permissions
l. Individual lines' tariff
numbers

numbers
m. Numbering of rules and items
n. Arrangement of narrative

matter on page
o. General explanation of tariff arrangement
p. Geographical description of territory covered

NOTE: Primary questions: (1)
Can a standard set of general rules and other common and essential provisions be devised? (2) Can some of these (e.g., f, i, j,) be carried exclusively in a single common publication such as the classification? (3) Can all of these be standardized as to number and/or position in all tariffs?

5. Form a. Loose leaf vs. supplement

a. Loose lear vs. type b. Standardization of typo-graphical design and lay-out c. Numbering of pages

Language
 a. Simple narrative style vs.
 the traditional stilted style
 which leans heavily to the
 technical and legal side

7. Symbols and reference

marks
a. Standardization
b. Reductions in need for c. Position in tariff for ex-

8. Routing instructions
a. General and specific
("Open" routing provisions)
b. Individual carrier exceptions
c. Routing symbols in rate items with explanations elseitems with explanations eisewhere
d. Standard position in tariffs
e. Separate routing tariffs
vs. inclusion in rate tariffs
f. Variations in methods of
stating
g. Gateway vs. interterritorial through routing
h. Internal routing schedules
i. Circuity limitations
i. Emergency routing clauses
k. Standard circuity rule

9. Supplementation
a. Numbering of supplements ments b. Volume of supplemental

c. Cancellation of matter d. Cumulative indexing e. Blanket supplements f. Revised pages g. Suspension, postponement, vacating and cancellation supplements
h. Partial amendment of

10. Cross-referenting a. To other tariffs b. To other sections c. To other provisions

11. Commodity tariffs a. Specific for major com-

modity groups vs. use of general commodity issues b. Consolidation of general commodity tariffs c. Grouping miscellaneous rates on same commodity

rates on same commodity

12. Effective dates
a. Scattering throughout
month as against preference
for first and middle of month

13. Grouping of stations and
rate basis issues
a. Alphabetical vs. geographical listing
b. The place for showing
rate basis point or group
c. Alphabetical arrangement
by states vs. straight
d. Geographical arrangement
e. Rate basis points and
numbers

numbers f. Separate issues for basing and rates 14. Issuing Source a. Central agency vs. indi-

14. Issume a. Central agency vs. vidual line b. Reduction in number of issuing agents c. Over-lapping by agents 15. General uniformity of tariffs

16. Numbering of stations for identification

identification
17. Consolidations and reductions in number of tariffs
a. Exceptions to classification
18. Effective matter in partly cancelled tariffs
a. In connection with suspensions

19. Graveyard items
20. Tariffs of distances
21. Use of maps in tariffs
22. Tariff indexes

23. Expiration dates
24. Uniform punching of filing

#### SPECIAL SERVICES TARIFFS

 Processing-in-transit or storage-in-transit tariffs
 a. Statement of inbound ara. Statement of imputities b. Statement of outbound

b. Statement of authorized processes
d. Statement of transit

charaes e. Standardization of rules, regulations and processes f. Out-of-line and back-haul

r. Out-or-line and back-haul rules and charges g. Essentiality of certain re-auirements and procedures Streamlining of paper work h. Inbound rate cut-back ar-rangements vs. through rate

rrangements
Settlement plans and op-

Outbound billing options k. Consolidation and reduc-tion in number of tariffs

2. Diversion and reconsign-

ment tariffs
a. Present points of difference in tariffs
b. Feasibility of single tariff
for national application

Tariffs providing for stop-ping-in-transit to complete load or partly unload
 Present scope of applica-

a. Present scope of applicability
 b. Present points of differ-

ence c. Feasibility of single tariff for national application 4. Switching and terminal tariffs a. Consolidated agency issues vs. individual lines' tariffs

6. LCL pick-up and delivery

7. Miscellaneous special services tariffs
a. Port services and charges

GENERAL COMMENT: Nowhere is simple clarity more badly needed than in the rules, regulations and other narrative provisions in these special services tariffs. Nationwide uniformity in many provisions is believed possible and is patently desirable.

#### RATE ASCERTAINMENT

Matters in classifications and rate tariffs which make for complexity and uncertainty in rate ascertainment

1. Classification of commodi-

a. Descriptions (use of terminology largely familiar only to the particular trades) b. Punctuation c. Qualifying or descriptive

words
d. Use of classification index to give effect to Committee rulings
e. Classification rules
f. Classification exceptions

Commodity description
 Descriptions in commodity
 rate and classification exceptions schedules different
 from classification proper
 Use of terminology largely familiar only to particular
 trades

c. Punctuation d. Qualifying or descriptive words
e. Uniformity of commodity
lists or descriptions

3. Expression of rates in units of weight or measurement u. Per 100 pounds b. Per ton of 2,000 pounds c. Per ton of 2,240 pounds d. Per gross ton same as net ton

net ton
e. Per car of given weight
f. Per car regardless of
weight

g. Per cord of 128 cubic feet

h. Other

4. Alternation of rates
a. Specific point to point vs.

mileage
b. Between different sections
of the same tariff
c. Between different tariffs
d. Specific vs. maximum or ninimum

Alternating rates and ninimum—CL—LCL

f. Between class and com-

modify
g. Between classification and
exception ratings
h. Domestic vs. export, import, coastwise and inter-

porr, coasivise and coastal i. Through rates vs. aggregates of intermediate rates (1) Rule 56. (2) Route of movement aggregate rule.

(3) Equalized routes aggre-

5. Rules for application of rates at intermediate points a. Prevalence of Rule 27 In "open" routing tariffs,

b. In "open" routing tariffs, Delmar principle
c. In 1/C 20 Rule 4(k) routing Plan 1 types (Complete specific routing instructed)
d. In 1/C 20 Rule 4(k) routing Plan 2 types (Statement that rates apply via all lines parties to tariff)
e. In absence of internal routing when single carrier has more than one route between two points it serves
f. Affecting points outside scope of tariff
6. Routing instructions

6. Routing instructions
a. Are they checked and observed by: (1) Shippers? (2)
Carriers?
b. Do the ends justify the Do the ends justify the

means?

7. Manifestations and influences of the Fourth Section and its administration a. Routing (1) Circuity limitations (2) Minimum earnings b. Minimum rates c. "Holding-out" rules d. Rule 56 e. Combinations published as joint through rates with split minima or description

minima or description
8. The statement of rates
a. Arrangement of items and
rate tables
b. Multiple rate sections in
the same tariff
c. Use of rate basis numbers
instead of rates requiring
reference to tables for rates
in connection with commodity rates in connection with the ity rates d. Mileage rates vs. point to

d. Mileage rates vs. point to point or group to group e The statement of rate scales or tables in a single tariff or in the classification f. The group plan of stating rates g. Individual carrier excep-

tions h. Grouping of stations Use of the phrase, "Except where otherwise provided"

#### TARIFF CIRCULAR NO. 20

I.C.C. Tariff Circular #20 and comparable tariff rules of State regulatory bodies

1. A critical study to isolate obsolete and unnecessary

rules

2. A critical study to develop desirable additional rules

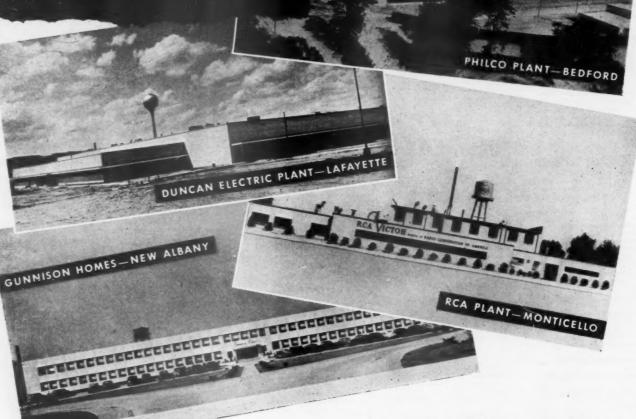
3. A critical study to isolate rules, the difficulties in observance of which outweigh all possible value to the public in their retention

4. A critical study to point up those rules which make for extravagance in volume of tariff matter, printing and

compiling costs, and in the time of tariff users NOTE: As research demonstrates the need of treatment for individual rules, it is the plan to work out a suitable change with officials of the Bureau of Traffic, I.C.C. and, after approval by our authorities, pursue adoption of the change through the procedures set up in the Administrative Procedure Act (State action similarly)

## Up and down the Monon

industry flourishes and progresses, under ideal conditions including inland locations, ready markets, adequate man-power, raw materials, power and water, Monon TRANSPORTATION, ideal climate and living conditions—all sweetened with Indiana's famous Hoosier hospitality.





MONON

THE HOOSIED LINE

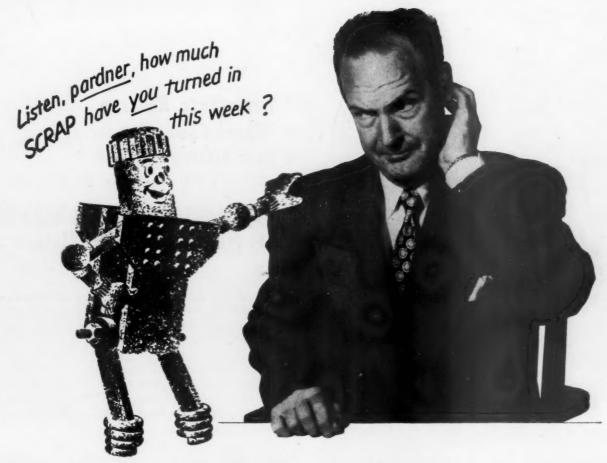
Have you tried Monon's new, dieselpowered, fast freight service lately? Its dependable service-with-a-plus includes higher and wider clearances and over-night deliveries between all points on its lines.

There are 22 on-line and off-line Monon agencies across the nation, serving shippers.

Warren W. Brown—V. P. Traffic
Charles C. Dawes—Mgr. Industrial and
Agricultural Dept.

CHICAGO, INDIANAPOLIS AND LOUISVILLE RAILWAY COMPANY

PURINA MILLS - LAFAYETTE



#### Today, the steel business is your business

-it needs all your SCRAP, Now!

Suppose that every steel user were suddenly told that he had to turn in a half-ton of scrap before he could get a ton of steel. It would start the most gosh-almighty treasure hunt for scrap that ever happened.

In effect, this "no-scrap, no-steel" situation virtually exists. For without *all* the scrap that industry can search out and start on its way to the mills, steel production will surely drop. It's as serious as that.

More scrap is urgently needed. Today the mills are turning out more steel than ever before. But they're scraping the bottom of the barrel as far as scrap is concerned. Defense and domestic demands for steel simply cannot be met unless at least 100,000 tons of "purchased" scrap roll into the furnaces—every day.

The bulk of this scrap must come from industry. That's why we're asking for your all-out help. That's why it's so important that you make the drive for scrap part of your daily operations. Make it your business to encourage every employee to report any obsolete, broken or worn-out machinery, tool or equipment that has seen its day. From this dormant "junk" must come the heavy melting scrap that the mills need most. Don't let your scrap lie idle; send it on its way. How about it, pardner?

You'll find your local scrap dealers listed in the yellow pages of the phone directory.



This page would ordinarily be used to tell you about

#### U·S·S HIGH STRENGTH STEELS

but, because without SCRAP we cannot produce steel, we are asking instead for your all-out help in getting more SCRAP to the mills.

AMERICAN STEEL & WIRE COMPANY, CLEVELAND
COLUMBIA STEEL COMPANY, SAN FRANCISCO - NATIONAL TUBE COMPANY, PITTSBURGH
TENNESSEE COAL, IRON & RAILROAD COMPANY, FAIRFIELD, ALA. - UNITED STATES STEEL COMPANY, PITTSBURGH
UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSE DISTRBUTORS, COAST-TO-COAST
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

UNITED STATES STEEL

FOR SAFETY

+ Immediate Reverse

+ Wheel Silencers

+ Low Lifting Weight

#### THIS IS THE CAR WITH MORE SAFETY FEATURES!

101
ALL NEW
INSPECTION
CAR

More safety makes for more efficiency with the new Model 101 inspection car. With its simple friction drive transmission—four speeds forward, three reverse—it's a pleasure to operate. Low center of gravity helps it hug the rails. Full-vision cab\* means more comfort, too. Rear lifting weight is only 98 pounds. All in all, the 101 is a 4-man car that should be investigated by every railroad. See your Fairbanks-Morse representative or write Fairbanks, Morse & Co., Chicago 5, Ill.

\*Also available without cab.



#### FAIRBANKS-MORSE

a name worth remembering

RAILROAD EQUIPMENT · RAIL CARS · PUMPS · SCALES · ELECTRICAL MACHINERY
DIESEL AND DUAL FUEL ENGINES · DIESEL LOCOMOTIVES · MAGNETOS



## 251,811 miles of wear in passenger service for this ALCOLID





and still
no pin rotation
no eye elongation

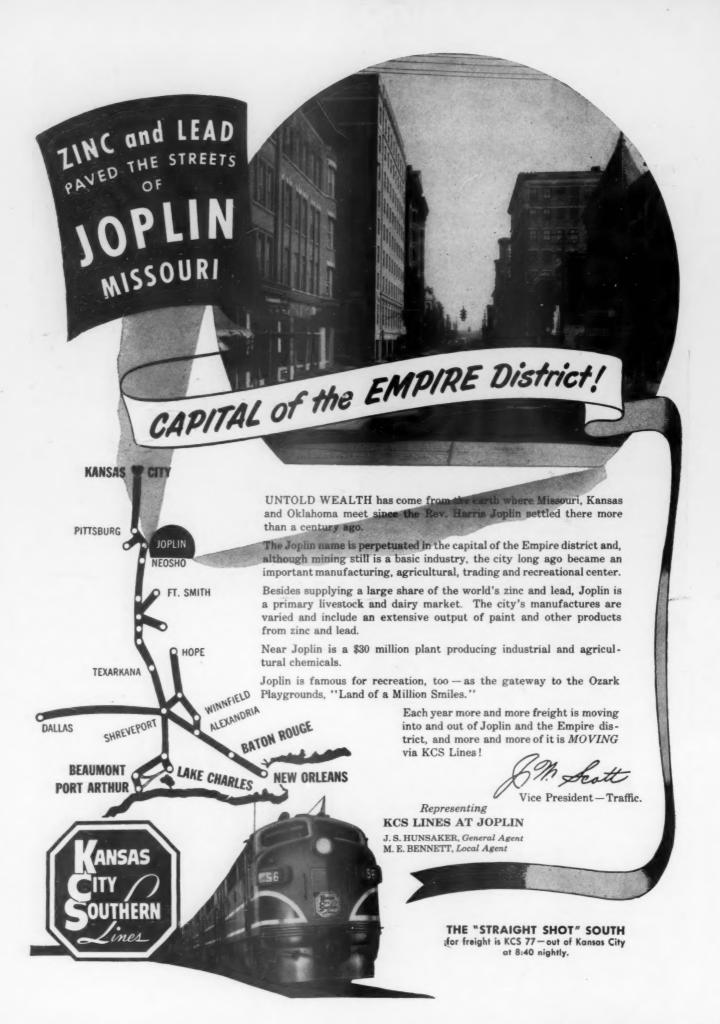
That's right—this ALCOLID served the equivalent of 17 years of freight service—and still held up with only negligible evidences of wear.

Reason? ALCOLIDS are designed to give a *lifetime* of service. Here is proof positive that the square headed, locked retaining pin never rotates, thus eliminating wear on the eyes of the hood. Elimination of eye wear prevents loss of lids and—coupled with the fact that a sturdy torsion spring locks the cover tight—prevents lid vibration. An ALCOLID is installed in a matter of seconds.

Put all these features to work for you. Send for complete details to your Alco sales representative in New York, Cleveland, Chicago, St. Louis, St. Paul, San Francisco.

ALCOLID

RAILWAY STEEL-SPRING DIVISION AMERICAN LOCOMOTIVE COMPANY



This

hand

safe,

handle

pull to

than

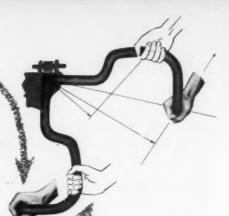
This

#### here's something new

#### This

hand position on the new, safe, inwardly projecting handle, requires 50% less pull to operate the coupler than

This hand position





For type E and F couplers A.A.R. APPROVED

(see A.A.R. Mechanical Division Circular DV-1246, article 5 and Fig. 2)

Standard R

THE REPORT OF THE PARTY OF THE

PAILWAY FOUIPMENT MANUFACTURING COMPANY

310 S. Michigan Avenue, Chicago 4 • 247 Park Avenue, New York 17



#### Soo Line's Busy Buying and Building

#### 1800 more freight cars, 18 new Diesels will help speed your freight

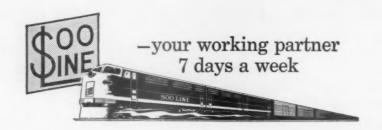
Every time this brilliant white flame sears into iron and steel it hastens the completion of another Soo Line freight car. 1250 new cars have been built in the past three years. Scheduled for construction in 1952 are 350 steel box cars and 200 all steel gondolas. In addition Soo Line will purchase 50 multiple service gondolas.

Super pulling power is already on order—18 more Diesel-electric locomotives will be added to Soo Line's fast-growing fleet, providing 97

Diesel-electric locomotives consisting of 134 units.

Like the new locomotives, Soo Line's new freight cars are being built better... better to serve you. Such improvements as nailable or perforated steel flooring give your freight a smoother, safer ride.

Yes, it's a multi-million dollar building and buying program designed to keep your freight rolling smooth and fast to and through the 7-State Soo Line Land.





Note\_ International's **BULK-LADING** SIDE DOOR

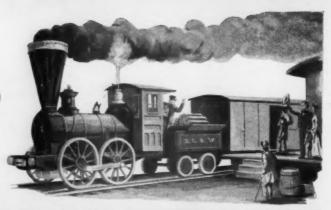
requires no inside grain door and has an access door for loading, inspection and sampling.

International Steel also produces the UTILITY door without the bulk-lading features, but BOTH DOORS INCORPORATE THE INGENIOUS INTERLOCKING AND DIMENSIONING FEATURES TO ASSURE POSITIVE RETAINMENT ON THE CAR STRUCTURE!

INTERNATIONAL STEEL COMPANY

Railway Division · Evansville 7, Indiana Underframes • House car sides • Side and end Ladders, Stainless steel flooring, bulkheads and fixtures for refrigerator cars

## THE IRON PONT COMES OF AGE





Shipping by rail was a hazardous business a hundred years ago.

The crude little wood-burning engines with their light wooden box and flatcars huffed and puffed over the steep and humpy roadbeds, offering little protection to their cargoes. Derailment was usual. Shippers never knew when nor in what condition freight would reach its destination.

But, over the years, times have changed. And shipping via the Lackawanna Railroad has changed with the times.

Today, a great fleet of Diesel-powered locomotives, operating over the Lackawanna mainline between New York and Buffalo, haul mighty trainloads of freight at speeds up to 65 miles an hour. Modern steel-sheathed cars assure safe and dependable transportation for every type of shipment. New mechanized equipment at Lackawanna's strategically located docks and terminals and a mammoth marine fleet facilitate the handling of overland and export freight.

Five years of the biggest modernization program in our history have greatly strengthened Lackawanna's service to the nation's shippers. Now as we enter our

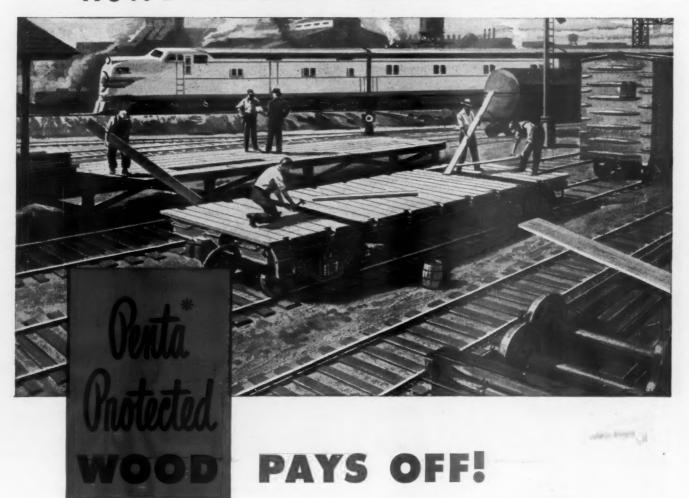
second century, we of the Lackawanna Railroad look back with a sense of pride to the accomplishments of the past and pledge ourselves to write an even brighter chapter of transportation progress in the years to come.



### Lackawanna Railroad

SHIPPERS WHO ARE IN THE KNOW, CHOOSE THE ROUTE OF PHOEBE SNOW

# when maintenance costs more than ever...



Keep your stock rolling with a minimum of maintenance . . . use PENTA! When you protect car lumber—and all lumber with PENTA . . . you cut maintenance costs by giving wood longer, more dependable life.

For years to come, Penta will protect wood against termites and decay . . . will give wood greater serviceability and longer life. And your maintenance crews will find Penta-Protected wood is clean and easy to handle.

PENTA-PROTECTED wood costs you less per year. This saving is proved by railroad service records which show treated wood lasts three to four times longer than untreated wood.

Protect your investment in wood . . . use PENTA-PROTECTED wood not only for car lumber but also for poles, loading platforms, all wood buildings and other wood construction. For more information about this sound investment, write Dow, Dept. PE-45A, for free booklet, "Pointers on Penta."

INVESTIGATE CONTA THE CLEAN WOOD PRESERVATIVE

will not leach . . . can be painted over

\*PENTA is a popular abbreviation of the name of the chemical, PENTAchlorophenol.

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN



RIGHT—The AMCCW wheels are pressed on the axle, one at a time, usually at pressures of 50 to 60 tons. Then the pressman measures at least three points around the mounted wheels to check for accuracy of gage, alignment, and direction of bore.

BELOW — AMCCW chilled car wheels are bored faster, more easily, with less wear on cutting tools, than any other type of car wheel—a saving in time, temper, and equipment. A micrometer is used to measure the bore to the last thousandth of an inch.





# why the WHEEL SHOP MEN like chilled car wheels

Wheel Shop men can tell you quicker than anybody else how they can bore AMCCW chilled car wheels close to twice as fast, with greater speeds and feeds...how they save time and expensive equipment...how they mount with a firm grip at only 50 to 60 tons pressure.



Chilled car wheels are not only easier to mount, they make better safety records, because iron likes to cling to steel. That's why AMCCW wheels are the most popular ones in the Wheel Shop.

NOW, more brackets—thicker, heavier, more continuous flange support; heavier tread on both rim and flange sides.



Low first cost

Low exchange rates

Reduced inventory

Short haul delivery

Increased ton mileage

High safety standards

Complete AMCCW inspection

Easier shop handling

## ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

445 North Sacramento Boulevard, Chicago 12, III.

American Car & Foundry Co. • Southern Wheel (American Brake Shoe Co.)

Griffin Wheel Co. • Marshall Car Wheel & Foundry Co. • New York Car Wheel Co.

Pullman-Standard Car Mfg. Co.



# EVERY CAR ARGET!

In the hump yard, every car's a target ... a sitting duck for the car you shoot at it. When cars couple, impact forces upon the struck car are equal to those upon the striking car... and with heavy cars rolling, more often than not, at speeds of 5, 6, 7 and more miles per hour, these forces are sufficient to seriously damage conventional cars and shatter lading.

With each car subjected to these impact forces twice every time that it is humped, you have double reason for equipping all of your freight cars with Duryea Cushion Underframes. When the Duryea equipped car is the striking car, you get that 40% extra lading protection. But when the Duryea equipped car is the struck car, protection is complete...100%. The damage potential in this one hump operation is cut in half. Hence, the extra lading protection afforded by Duryea Cushion Underframe in this one hump operation, comprised of two successive impacts, is not 40% but actually 80%. The way today is to specify Duryea.

HULSON CO.

duryea cushion underframe



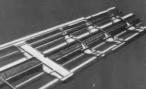
## FIRST IMPACT

The DURYEA equipped car reliling down the hump strikes to couple with a standing car. The DURYEA 36,000 ft. lb. capacity before closure provides that 40% extra lading protection.



## SECOND IMPACT

The DURYEA equipped car is now the struck car but, due to the floating center sill, closure does not occur even under excessive impact and there is slight shock transferring to car or lading. Protection is 100%.



THE SILL MOVES
WHILE THE CAI



ROAD SERVICE G-E 70-ton locomotives are tops for local locomotive mile for fuel), 91.65% availability and versatility freight service. Low cost operation (S.P. spent only 6.9¢ per

make them sure-fire money savers.

# S.P. SLASHES LOCAL FREIGHT OPERATION COSTS

WITH G-E 70-TON DIESEL-ELECTRICS

#### MAXIMUM UTILIZATION

By successful use of these diesel-electrics for road and switching service, Southern Pacific's Portland Division obtains maximum utilization. This performance excels that obtained from steam locomotives. The 70-tonners operate from various terminals in local freight service. Between runs they hustle about the terminal switching cars as needed. The ability of General Electric 70-ton

diesel-electrics to perform a variety of jobs has cut S.P.'s operation costs drastically.

The 70-tonner is light enough for operation on light rail (50- to 60-pound) and bridges where axle loading is limited. Its 600-hp engine is powerful enough for yard and mixed train service, yet fast enough for light passenger hauls.



YARD SWITCHING By using their G-E 70-tonners for yard switching between local freight runs, S.P.'s Portland yard assignments.

Division keeps them busy on both branch line locals and

### 91.65% AVAILABILITY

For a twelve month period ending Dec. 31, 1950, Southern Pacific averaged 91.65 availability with its G-E diesel-electrics. The 70-tonners have high availability because:

(1) a 500-gallon fuel tank provides from 24 to 48

hours of continuous operation, depending on the work load.

- (2) maintenance can be done during the locomotive's idle hours, and
- (3) they are ready for operation at a moment's notice.

#### 76.77¢ PER MILE OPERATION COSTS

ALL EXPENSES—fuel, lubricants, enginemen wages, labor, maintenance, supplies and enginehouse expense for twelve month period ending Dec. 31, 1950totaled only 76.77¢ per locomotive mile for the 70tonners. Operation figures kept by Southern Pacific

show that fuel cost per mile is only 6.9¢! Other savings are made by eliminating the need for maintenance of fuel and water supplies away from the roundhouse. Investment required for locomotive service facilities is low.

#### YOUR RAILROAD CAN ALSO SAVE MONEY

General Electric 70- and 44-ton diesel-electric locomotives have an application on your road. For further information on these money savers contact your nearest G-E sales office, or write to General Electric Company, Schenectady, New York, for bulletin GEA-4657A.

You can put your confidence in\_

GENERAL CO



ELECTRIC



# Diesel Power EXCLUSIVELY is Now Used SYSTEM-WIDE!

Here's good news for shippers who know how modern Diesel power adds efficiency and speed to freight shipments...and for passengers, too, for whom Diesel power means smooth, clean transportation—

EVERY MILE of the Lehigh Valley route between the Eastern Seaboard and the Great Lakes is now completely Dieselized . . . freight trains, passenger trains, switching operations in

freight yards, and a fleet of Diesel tugs in New York Harbor to speed freight on its way to domestic and world markets.

COMPLETE DIESELIZATION is another milestone marking Lehigh Valley progress throughout its more than a century of service—one more reason to specify our railroad for your freight and travel needs.

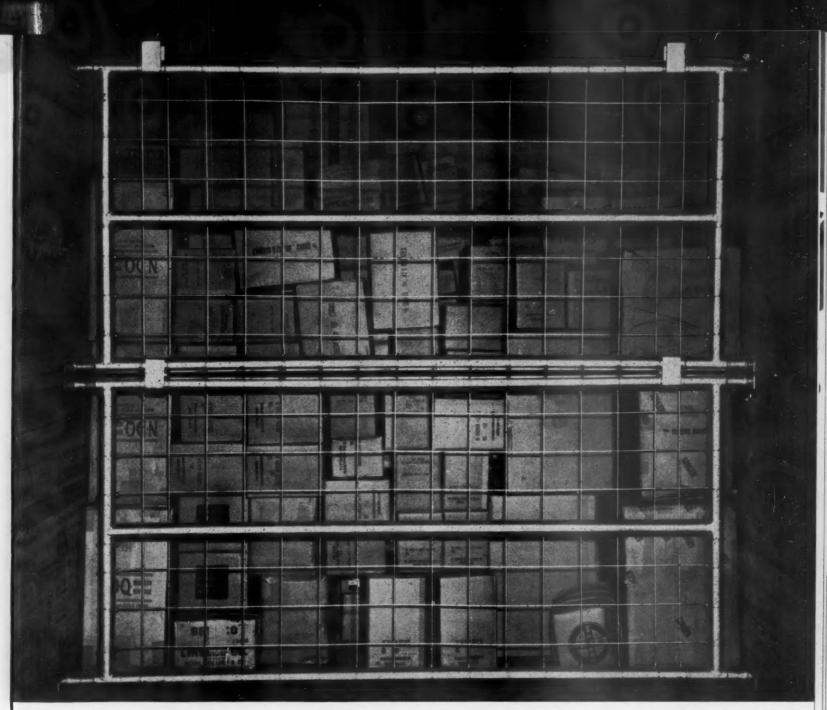
Ca. Major

President

use Pennsylvania Station, New York and Reading Terminal, Philadelphia

LEHIGH VALLEY
PASSENGER TRAINS

THE ROUTE OF THE BLACK DIAMOND



Seen in the picture is the Pittsburgh Sectional Bulkhead used in conjunction with a full loaded tier shipment. For a half loading, only one section would be used. All sections are identical and fit securely on top of one another. Telescoping cleats permit fitting all car widths. The average installation time—four minutes for two sections.

## How Pittsburgh Bulkheads Pay for Themselves

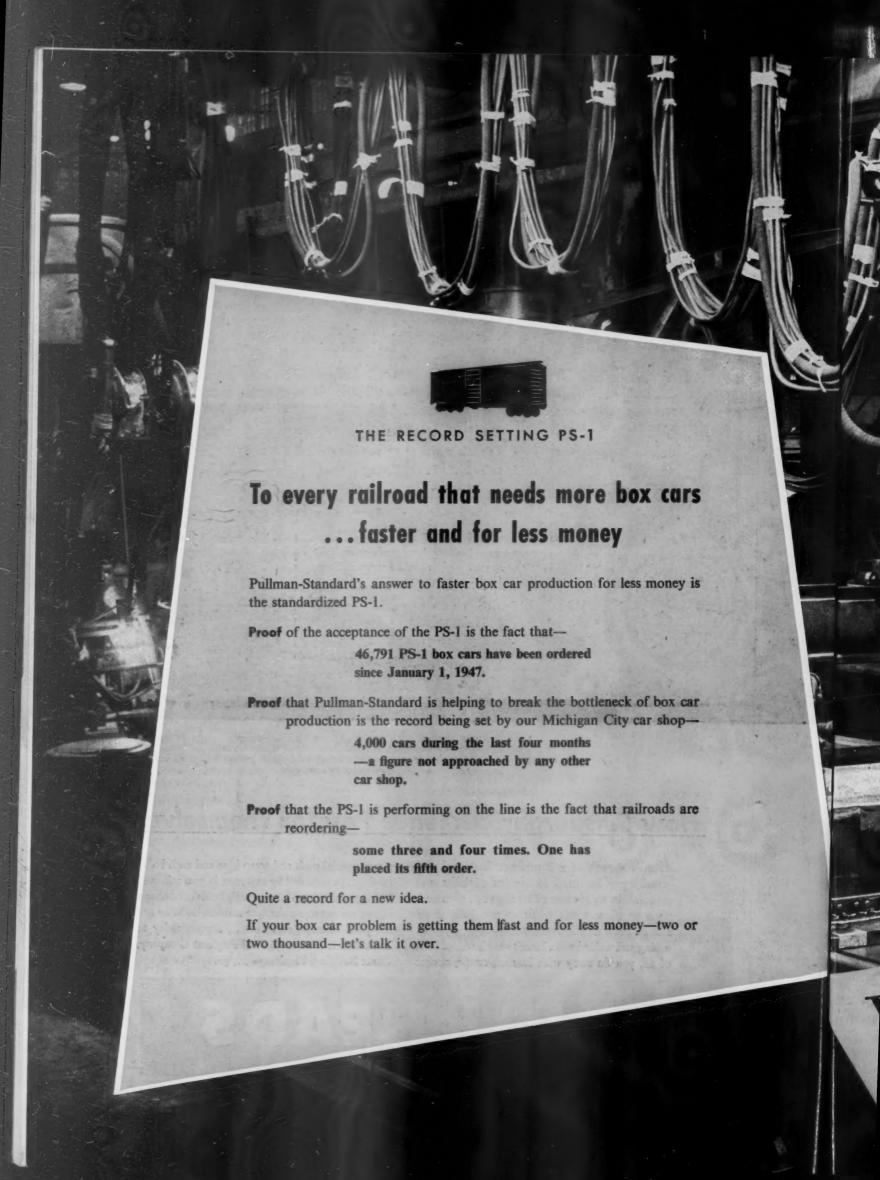
Records show that a Pittsburgh Bulkhead will actually pay for itself in savings of labor and materials in an average of 20 trips... then continue to show a net profit to you indefinitely because each unit is sturdily built of heavy steel tubing and welded wire. Here's how it works. First of all, you do away with lumber, straps, anchor

plates, special tools and scrap bins and each bulk-head can be installed by two men in two minutes. Moreover, the cargo is so securely held that damage claims are cut to an absolute minimum. Why not cut your dunnage cost now . . . write today to Dept. RA-1, Pittsburgh Steel Products Company, Grant Building, Pittsburgh 30, Pa.

## BULKHEADS

a product of Pittsburgh Steel Products Company

A Subsidiary of Pittsburgh Steel Company



## **Special Machinery Designed by Pullman-Standard Builds PS-1's Faster**

This automatic welding machine was custom-engineered by Pullman-Standard . . . to speed up welding. The jig is 2 freight cars long, and holds the side sheets in alignment while deepfusing them to the Z-bar side posts. It's one of the many machines specially designed by Pullman-Standard to build PS-1's faster and for less money.

CAR MANUFACTURING COMPANY

CHICABO . HEWYORK . CLEVELAND . WASHINGTON, D.C. . PITTSBURGH



## GET IN THE SCRAP



Production of the new steel you'll need tomorrow for rail laying programs and car building depends on the iron and steel scrap that goes back to the steel mills today. To keep steel products flowing to you takes over 50 million tons of scrap a year!

Steel mills themselves can furnish only two-thirds of the scrap they need. The rest must come from you. Your idle scrap should be put to work to aid the National Defense effort and make money for you. So sell it, ship it—keep it moving.

Here's what you can do to help get much-needed scrap to Steel Mills

- 1 Check your shops and yards for every possible source of iron and steel scrap.
- 2 Cut your scrap to charging-box size.
- 3 Classify and segregate alloy steels and special materials for higher prices.
- 4 Move scrap fast through your scrap dealer.

#### OXWELD RAILROAD SERVICE COMPANY

A Division of Union Carbide and Carbon Corporation

Carbide and Carbon Building Chicage and New York
In Canada:
Canadian Railroad Service Company, Limited, Toronte



SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

The term "Oxweld" is a registered trade-mark.



## PROOF of this Bearing is in the Lining!

N-B-M Axle Bearings . . . with linings of centrifugally cast Silver Babbitt . . . give longer, lower cost service.

Here's a unique bearing lining that helps solve some old axle bearing problems . . . a lining of centrifugally-cast \* 397 Silver Babbitt.

Long-wearing N-B-M Silver Babbitt has all the needed physical properties for better service. It stands up under pounding and high torque loading . . . embeds grit . . . conforms to the axle . . . has exceptionally high resistance to corrosion.

To top it off, this Silver Babbitt is centrifugally-cast in the bronze back. The result is a stronger bond that is consistently strong. Gas holes are eliminated. And equally important, centrifugal-casting of the lining results in a uni-directional grain structure that helps roll up new performance records.

From thorough engineering research to specially developed N-B-M machines, nothing has been spared in building these bearings for economical and dependable operation. That's why you'll find more and more Diesel locomotive builders specifying N-B-M—for original equipment and replacement.



This N-B-M developed machine takes the guesswork out of centrifugal casting!

It's fully automatic—eliminates any human error. Thermostats insure exact metal temperatures. Timers control pouring and quenching. The result is maximum uniformity... consistent high quality.



Brake Shoe

## NATIONAL BEARING DIVISION

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# NEW BOOK TELLS WHITING DROP TABLE STORY



DERN POWER

# Here's how MAGNUS builds EXTRA MILEAGE into Traction Motor Support Bearings

FINAL MICROMETER TESTING under load means perfectly mated bearing halves—your assurance of better performance on the road with Magnus High Mileage bearings.

Putting cost-saving extra miles into precision bearings is a real art with Magnus. It means a lot of extra care in manufacture that really pays off in performance: Magnus Traction Motor Support Bearings are setting mileage records in Diesel locomotives the country over.

Here are just a few highlights of Magnus HIGH MILEAGE bearing production:

- SATCO LINING METAL gives greater resistance to wear and load — stronger bonds — increased hardness at high temperatures.
- IMPROVED FLANGE FILLET PROFILE prevents "riding" the fillet and "feathering" of the lining metal.
- HI-STRENGTH BRASS BACKS, made from high-tin, finegrained wearing metal mixes that are Magnus-guaranteed.
- COMMUTATOR-PINION END INTERCHANGEABILITY a Magnuspioneered improvement that simplifies maintenance and saves in bearing stockpiling.

Magnus HIGH MILEAGE Traction Motor Support Bearings are available for replacement on every type and make of diesel-electric and electric locomotives, and "MU" cars. For complete information, send for your free copy of Bulletin No. 6000. Just write a post card or letter to Magnus Metal Corporation, 111 Broadway, New York 6, N.Y.; or, 80 E. Jackson Boulevard, Chicago 4, Ill.



... for every type and make of diesel locomotive

MAGNUS METAL CORPORATION Subsidiary of NATIONAL LEAD COMPANY

## "THE SILVER BULLET"

Louisville and Nashville Railroad



## Diesels on the "OLD RELIABLE" use ...

WITH "name" trains connecting Chicago and New Orleans as well as New Orleans and New York ... and with both freight and passenger service throughout the South ... the Louisville and Nashville Railroad is proud to be known as the "Old Reliable."

Over 200 diesel freight units on the L&N are lubricated with STANDARD HD Oil. That's one way the L&N has found to help deliver the kind of service that has earned this reputation.

More than 70 railroads now use STANDARD HD Oil in their heaviest freight service. Acceptance like this

Oil

indicates the ability of STANDARD HD to provide efficient and economical lubrication for all types of diesels. Make this widespread success your basis for investigating STANDARD HD Oil. A Standard Oil Railway Department representative can help you.

Standard Oil Company (Indiana), 910 South Michigan Avenue, Chicago 80, Illinois.

STANDARD OIL COMPANY

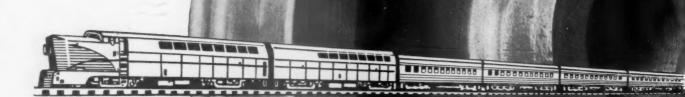


(Indiana)

ODAY'S HIGH PRICED LADING?

...use PEERLESS PROTECTION, the H-1-B2 your best insurance against loss!





Users' experience
certifies Freedom Wheels
as the most successful means
of eliminating thermal
cracking under the
unusually severe
braking conditions in today's
high speed operations.

Over 500,000 in service. Ask a user about Freedom Wheels' high-speed, severe-braking performance.



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## THE TRANSCONTINENTAL CUT-OFF

- · cuts time
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Fast coordinated schedules!

Impact recorder tested!

Direct short mileage routes!

No large terminal switching operations!

Your patronage is constantly solicited and always appreciated.

## QUANAH, ACME & PACIFIC RAILWAY COMPANY

W. L. Richardson, Vice President — Traffic QUANAH, TEXAS



QA&P - FRISCO - AT&N (one system) serving nine states with over 5,000 miles of railroad.





## **FAR-AIR\*** Dynamic Grille is functional and decorative

Heavy snowstorms harass diesel engines by overloading filters, which shuts off the air supply or "floods" the engine with snow, sometimes causing short circuits and failures. Heavy dust conditions often encountered have an equally detrimental effect.

This problem was submitted to the Farr Company for study. After exhaustive laboratory and field tests, the Far-Air grille was developed whose specially formed louvers were equally efficient in buffing off foreign particles regardless of travel direction, yet did not interfere with air requirements.

Solving problems of this type for the railroad industry is a specialty of Farr Company. If you have a filtration problem, Farr engineers are available to aid you in properly solving it. Write today for complete information on the new Far-Air Dynamic Grille and other railroad products. NEW ADDRESS: P.O. Box 10187 Airport Station, Los Angeles 45, Calif.

## Here's how the FAR-AIR\* Dynamic Grille Operates

The function of the grille depends on the speed of the equipment, i.e., the relationship of the air velocity past the grille to the entering air velocity through the grille. It is mounted on the side of the locomotive with the louvers vertical and flush. When the locomotive is in motion, air entering through the grille is forced to make a 90° turn. Foreign particles such as snow and dirt being heavy in mass do not make a sharp turn and are then impinged on the curved louvers and buffed out into the outer air stream.

OUTSIDE OF CAR

MEAVY DUST PARTICLES
DEFLECTED FROM GRILLE

DORECTION OF
CAR TRAVEL

THE DEFLECT OF CAR

MEAVY DUST PARTICLES
DEFLECTED FROM GRILLE

DYNAMIC GRILLE

THE DEFLECT OF CAR

MEAVY DUST PARTICLES
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\*Trade Mark Reg.

## FARR COMPANY

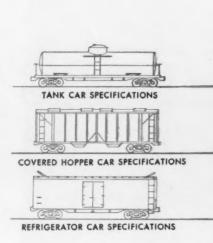
"Better by Farr" Manufacturing Engineers

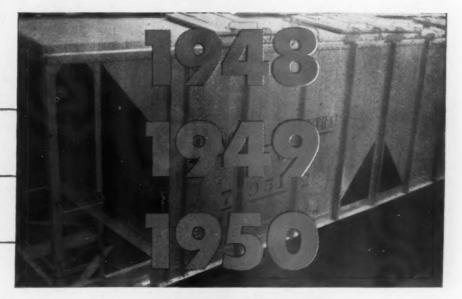
Los Angeles • Chicago • New York

Mf'd under license by Control Equipment Co., Ltd., Montreal, Canada

Covered hopper car finished with CARCLAD in September 1946. Inspections made in September 1951, after 5 full years of service, still show finish intact.

## 1947





NOW...

1951

protection against acids...alkalies...corrosive cargoes...

## for YEARS instead of MONTHS!



Now proved in continuous service for periods of more than FOUR years on covered hopper cars, Sherwin-Williams CARCLAD offers an end to costly refinishing schedules formerly required.

Equipment once requiring refinishing within months now can be protected for years—even in cement, soda ash and similar service. CARCLAD—a product of Sherwin-Williams research—provides new long-life resistance to acids, alkalies, sulphur, phosphate, common salt, petroleum products and alcohols. It withstands repeated scrubbing and washing with strong cleaning solutions.

Ask for proof of the remarkable performance of this new finish. See actual photographs and records of CARCLAD-covered hopper cars in service on leading railroads! Contact your Sherwin-Williams representative or write The Sherwin-Williams Co., Transportation Division, Cleveland 1, Ohio.

SHERWIN-WILLIAMS
RAILWAY FINISHES





PATENTS PENDING



GREAT LAKES STEEL CORPORATION
Steel Floor Division • Ecorse, Detroit 29, Michigan



Time and millions of on-the-job miles have proved the value of NAILABLE STEEL FLOORING in general-service cars.

Whether you are building or rebuilding boxcars, flats, or gondolas, get the facts on NAILABLE STEEL FLOORING. Weigh carefully its cost versus value in providing a positive answer to a major problem—and a means to realize future operating economies.

Sales representatives in Chicago, Philadelphia, St. Louis, Atlanta and San Francisco.



COAL HANDLER FOR THE I. C. is a powerful International TD-18, here shown digging in at Chicago's Hawthorne Yards.

# Feed Lot for Iron Horse

## How the Illinois Central uses an International TD-18 to stock-pile and compact coal in Chicago Yards

There's still a lot of steam pulling a lot of trains, and coal handling will be a major job for years to come. At the Illinois Central's Hawthorne and Markham Yards—both on Chicago's outskirts—the coal problem used to be complicated by costly fires in the storage piles.

Then the I. C. got an International TD-18 crawler tractor to compact the piles, and the trouble stopped. Besides compacting, the rugged International moves coal from the stock piles to where power shovels can load it into tenders. During a recent electric power failure, it turned the Hawthorne roundhouse turntable. In fact, it's available for almost any off-track job anywhere in the Chicago terminal area.

Your International Industrial Distributor offers a complete line of International crawler and wheel tractors. They come with special equipment to handle a hundred jobs in yards, in shops, along the right-of-way. Ask your distributor for details. Get International "Power that Pays!"

INTERNATIONAL HARVESTER COMPANY, CHICAGO 1, ILL.



MOVES 200 TONS OF COAL a day from the 7,000-ton stock pile. Also compacts the pile itself, and does similar job at nearby Markham Yards.

INTERNATIONAL



POWER THAT PAYS



# UNARCO INSUTAPE® Ulrap-on Fipe Insulation

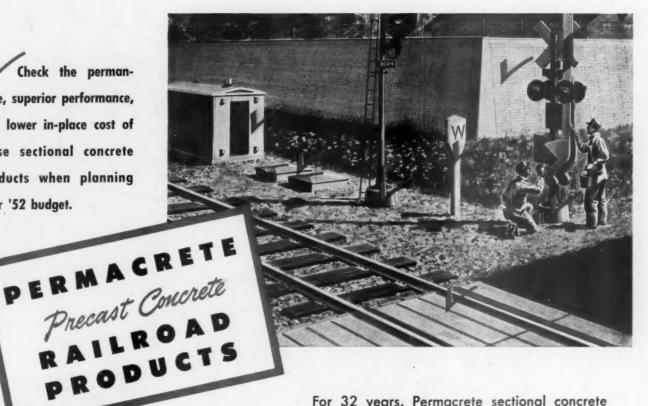
Providing a means of insulating locomotive steam pipes, with their compound curves, radical bends, limited clearances and exposure to the weather—that is the job of Insutape. And, because it has done its job with lasting efficiency and economy, it has long been the recognized standard with locomotive builders and railroads from coast to coast.



## UNION ASBESTOS & RUBBER COMPANY

332 SOUTH MICHIGAN AVENUE • CHICAGO 4, ILLINOIS

Check the permanence, superior performance, and lower in-place cost of these sectional concrete products when planning your '52 budget.



CRIBBING Tri-Crib units for open or closed face retaining wall construction for fills, cuts, bridge abutments and water front installations. Faces 6" high and 6' long. Headers and Stretchers cast in one unit to carry its own internal pressure.

CROSSING SLABS 6' long, 1634" wide and from 5" to 8" thick in multiples of 14". 2" steel armor channel is cast on top edge. The safest crossing yet devised for high-speed rail and highway traffic.

POSTS For right-of-way and farm fence, mile posts, elevation and junction posts, land line and cable location markers.

BUILDINGS-BOOTHS For greater fire and weather protection, lower in-place cost, sectional concrete buildings for signal, telephone, communications, and maintenance of way departments.

SIGNAL FOUNDATIONS For every type of signal installation, these sectional foundations are easy to install with hand labor only and afford greater stability.

BATTERY BOXES Five light weight steel reinforced concrete sections, complete with slat bottoms, terminal boards, insulation, frost cover and steel cover. Sizes 12665, 12666, 12667, 12668. Also one piece Air Cell and Track Circuit boxes.

For 32 years, Permacrete sectional concrete railroad products have been used by leading railroads. Manufactured of high strength, quality controlled concrete, steel reinforced, these products have passed every test for permanence, stability and cost-in-place economy. The sections permit easy handling, shipping, storage, and field installation with a minimum of hand labor and time . . . without the aid of mechanical equipment. Permacrete products provide greater safety and years of dependable, maintenance-free service.

If you are interested in faster, more economical installations, send for complete catalog today.



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**FOUNDATIONS** 

CRIBBING

BOOTHS

HOUSES

CROSSING SLABS

BATTERY BOXES

THE MOST COMPLETE LINE OF SECTIONAL Precast Concrete RAILROAD PRODUCTS



N THE Great Midwest, Freight Service for Agriculture and Industry and for Connecting Roads is faster via

#### THE MINNEAPOLIS & ST. LOUIS RAILWAY

The M. & St. L., a modern, Diesel-powered Railway, is dedicated to constant improvement of that service.

Flagships of the M. & St. L. fleet are Daily Through Freight Trains, between Minneapolis, headquarters of the road for 80 years, and Peoria, its eastern terminus. No. 19, westbound, and No. 20, eastbound, make the 476-mile run in less than 18 hours, including four stops, at Albert Lea, Marshalltown, Oskaloosa and Monmouth.

These "hot shots," powered by big three-unit Diesel-electric locomotives, speed freight through

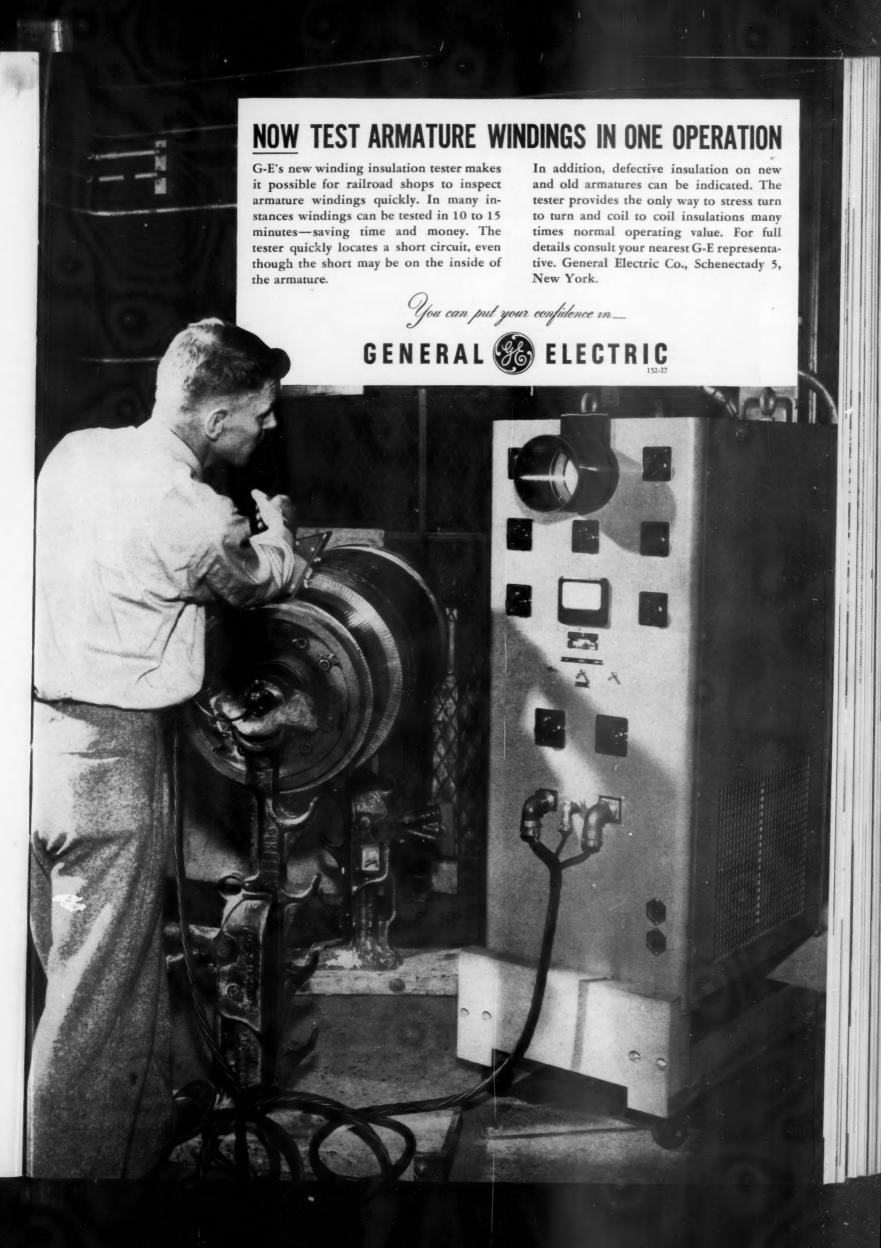
#### THE PEORIA GATEWAY



Routings over the M. & St. L. via Peoria save hours and even days on transcontinental "bridge line" traffic and on shipments, both east and west, between the Minneapolis-St. Paul territory and points throughout the East and South.

The Minneapolis & St. Louis Railway

Traffic Offices in 36 Key Cities





## Africa to Italy with Hannibal

Elephants did heavy duty as freight carriers in Hannibal's army. Today there's a better way—let Seaboard's Diesel fleet speed your shipments!

# Your Modern Route to and from The Southeast—

Personalized attention to your shipments is part of the complete transportation service Seaboard offers... service you can depend upon when you specify Seaboard.



Your nearest
Seaboard Freight Traffic
Representative will
cheerfully furnish information upon request.

SEABOARD N.G. S.G.
AIR LINE RAILROAD

THE ROUTE OF COURTEOUS SERVICE

# use Vanadium Steels and Irons

PART

You can obtain the mechanical properties required for satisfactory operation and long service life of Diesel locomotives by using Vanadium steels and irons.

Vanadium steel forgings, as well as Vanadium iron castings, have been designed for the best balance of mechanical properties obtainable for the service required of each specific part.

Recommended steel and iron compositions are given in the accompanying list for a variety of parts, many of which have already established satisfactory service records. A choice of materials is shown in some instances, in recognition of preference and of those variations in design and type of service which govern the properties required.

The metallurgical engineers of the Vanadium Corporation of America realize that each part is an individual problem, and they are prepared to cooperate with you to the fullest extent in selecting the best material for each application.

Write for Data Sheet giving details of composition, heat treatment and mechanical properties of Vanadium steels and irons for various Diesel applications.

> MAKERS OF ALLOYS



CHEMICALS AND METALS

	STEELS
AXLES	C-V steel
BRAKE RIGGING CASTINGS	Mn-V cast steel
CAMSHAFTS	Cr-V (AISI 6120) steel
COUPLERS	Mn-V cast steel
CRANKSHAFTS	Cr-Mo-V (4140+V) steel Ni-Cr-Mo-V (4340+V) steel Cr-V (6140) steel Cr-V (50T46) steel C-V (1045+V) steel
ENGINE BLOCK BASE	Mn-V plate steel
EQUALIZERS	Mn-V steel
GEARS	Cr-V (6145) steel
INJECTOR TIPS	Cr-V (6145) steel
PISTON PINS	Cr-V (AISI 6120) steel
ROCKER ARMS	Mn-V cast steel
ROCKER ARM BRÂCKETS	Mn-V cast steel
ROCKER ARM SHAFTS	Cr-V (AISI 6120) steel
SPRINGS	Cr-V (AISI 6150) steel Cr-Mo-V steel
TRUCK FRAMES	C-V cast steel Mn-V cast steel Ni-V cast steel
	IRONS

MATERIAL

\*Graphidox is a graphitizing and deoxidizing alloy.

Mn-V cast iron

Mo-V cast iron

Mo-V cast iron, Graphidox-treated\*

Cr-Mo-V cast iron, Graphidox-treated\*

Cr-Mo-V cast iron, Graphidox-treated\*

Ni-Mo-V cast iron, Graphidox-treated\*
Mo-V cast iron, Graphidox-treated\*
Ni-Cr-Mo-V cast iron, Graphidox-treated\*

## VANADIUM CORPORATION OF AMERICA

CYLINDER HEADS

CYLINDER LINERS

**PISTONS** 

**EXHAUST MANIFOLDS** 

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## THE CARE AND NURSING OF TANK CARS



Water often makes non-corrosive liquids into corrosive ones...keep cars covered

## Another way to get more from your GATX tank cars



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So many people have requested reprints of these cartoon advertisements that we are making them available to you for use in your shops. Just write us.

## RAILWAY AGE

EDITORIAL COMMENT

## THE I.C.C. IS BEING STARVED

There is a well-known government agency in Washington, D. C., which has 28 per cent fewer people on its payroll now than it did 10 years ago, notwithstanding a large increase in the duties imposed upon it by law. This agency has had to meet inflation and a much greater volume of work with an increase in its annual budget of but 12 per cent compared with 10 years ago.

The government agency receiving this stepchild's scanty and diminishing portion is the 65-year-old Interstate Commerce Commission-oldest and, deservedly, the most respected of the independent regulatory agencies. While no railroader-working in an industry which suffers more than any other from the effects of prodigal government spending and rapacious taxation-could be in favor of anything but a reduction in government appropriations and staff in general, he cannot look with satisfaction on the progressive anemia visited upon the I.C.C., which was convincingly described by Commissioner Hugh W. Cross in an address before the recent annual meeting of the Association of I.C.C. Practitioners. As long as the laws which cover the regulation of the carriers stand as they do, the carriers themselves are the first to suffer from loss of efficiency, brains or integrity on the part of the staff of the agency which holds power of life or death over them.

In recent years, Congress passed, and gave to the I.C.C. for administration, a large mass of new regulatory legislation—such as Parts III and IV of the Interstate Commerce Act, the Mahaffie Act and the Reed-Bulwinkle Act—passage of which helped to remedy some of the inequality of regulation among the several forms of transport. Surely, this additional load alone should justify a proportionate increase in staff and total salaries, provided the commission's staff was not excessive prior to the new legislation. And of all the criticisms which might be directed at the commission's staff, sheer laziness is not one of them.

Consideration must also be given to additional work imposed by the far greater activity by the carriers themselves-both in traffic and in proposed innovations upon which the commission must pass-during the past decade, compared with the level of the Thirties. Finally, the inflation in costs from which the carriers have suffered has not been avoided by the commission, either. The quality of personnel of the I.C.C. is threatened by this stinginess, because these employees are subjected to tempting offers from richer governmental agencies. Commissioner Cross declared that "the threat of dismissals and payless furloughs is having its effect upon the morale of our staff-and to me this is most disturbing. Just before leaving Washington, I learned that, since January 1, 1951, a total of 305 separations from the commission have occurred. Of these, 111 were occasioned by employees transferring to other federal agencies at increased pay."

An appeal for proper nourishment for the I.C.C. was voiced recently by Lowe P. Siddons, a distinguished industrial traffic manager who is chairman of the executive committee of the National Industrial Traffic League. Contrasting the niggardly treatment of the commission by Congress with that body's spendthrift habits generally, Mr. Siddons said: "Some of the bureaus of the government which play the game of politics have no trouble in getting \$150 million or more, with administrative expense allowances several times higher than that requested by the I.C.C."

The I.C.C. has no single person on its payroll engaged in the business of "public relations." It has no paid staff of drummers to go before the appropriations committees and enlarge its bite of the public monies. It is said the Department of Defense has a staff handling just "public relations" which is larger than the entire staff of the I.C.C.

Those who have a stake in the I.C.C.'s efficiency

should do "a selling job" in its behalf before the legislative authorities. The National Industrial Traffic League, the Transportation Association of America, the practitioners, and individuals representing shippers and business generally, have interested themselves in the financial problems of the commission during the past few years. The first-named has a committee, the members of which appear before the appropriations committees of Congress each year—on their own time and at their own expense—in behalf of adequate money for regulation. Surely the railroads have as great a stake and as great an obligation.

Support by the carriers of an adequate diet for the commission would in no sense constitute approval of carrier regulation as now imposed by law or the commission's administration of it. Large sums could be saved if the commission were to be relieved of all duties justified by the assumption that the railroads enjoy a monopoly. A multiplicity of duties tempts commission members to pick and choose among possible courses of action-to concern themselves with trivialities, such as tickets provided to the press for promotional projects, to the neglect of the basic health of their wards. The route to economy with the commission is to reduce its duties and powers to those plainly necessary in the national interest. To hold down its personnel and underpay them, while not decreasing the work to be done, is not the route to true economy. Starvation doesn't promote efficient performance by the railroads and it won't promote efficient performance by the commission either.

## "STEEL SERVES THE NATION"

The United States Steel Corporation is celebrating its fiftieth birthday this year. Of itself a golden anniversary is scarcely worthy of comment at a time when corporation after corporation, particularly among the railroads, is celebrating the centenary anniversary of its existence and functioning. But U. S. Steel's half century of corporate existence, coinciding as it does with the first half of the Twentieth Century, is significant because of the role it and the industry of which it is a part have played in the economic development and expanding standard of living which have characterized that period in America.

Deeming it inadvisable to indulge in an elaborate celebration of the event because of the present international situation, the corporation has marked the occasion by "Steel Serves the Nation"—a book which records U. S. Steel's major achievements since its organization in 1901 and sets forth the corporation's own appraisal of their significance in terms of service to the nation. The story of the activities of this corporation is a fascinating one, but beyond their significance, and beyond the significance of "integration" in the steel industry, of which U. S. Steel is probably the most

complete example, is the significance of the large corporation which many productive activities by nature require in order that high efficiency and low costs may be attained.

Large-scale production is essential in order that the quantity output necessary to sustain the accelerated industrial development of the last half century in America may be produced at the low prices essential to the widespread application of the output of the industry. And research and experimental engineering on a vast scale have been essential, as, for example, in the development of the great variety of alloys which have formed the basis for many ramifications of industrial development.

Of possibly greater significance than the part played by large corporations, such as U. S. Steel and the steel industry as a whole, in the advancement of the American civilian economy, is the part that they have played in national defense. The impact of research concentrated in large units and the effect of the decisiveness of the central management of large industry in expediting conversion from a civilian economy to a defense economy have played an incalculable part in the power which the United States has contributed to the winning of two wars during the half century. No economy in which the individual-or the administration of the concentrated wealth of many individuals which the corporation represents—is restrained in the straitjacket of a society in which the state is considered superior to the individual can possibly match the speed with which ingenuity in America meets the need for new invention and the need for accelerated production of defense material.

Steel and the railways have been closely associated in the development of the North American continent for much longer than the half century represented by U. S. Steel. The wrought-iron rail, which prevailed well into the last half of the Nineteenth Century, had to be replaced as frequently as every two years even under light traffic. The modern steel rail is now credited with an average life of about 18 years. In the field of rolling stock the railway industry depends upon the steel industry for axles and wheels, the latter presenting a growing field and one in which the needs of transportation are not yet fully met. New materials of construction, including low-alloy high-tensile steels and stainless steels, have changed the course of rolling stock construction during the past 15 years. And, now, in the current decade, the steel industry is reaching out to play its basic part in industrializing the western half of the United States which the railways first opened up more than three-quarters of a century ago.

U. S. Steel is the largest corporate unit in the American steel industry. But though it accounted for 66 per cent of the nation's steel production in 1901, when it was established, and has expanded its facilities prodigiously since then, it is now responsible for only 33 per cent of the country's output. Such a comparison affords some indication of the tremendous growth of the industry as a whole in this half-century.



Short routing reduces the number of cars passing through many yards, resulting in a saving in terminal expense for the railroads and in better freight car availability

# How Railroads Cut the Cost of Hauling Empties

Short routing of empty cars subject of many interroad agreements and several "regional" plans; "automatic short routing" coming in near future

The railroads save themselves, and ultimately their customers, thousands of dollars annually by "short routing" empty freight cars back to their "home" lines. When a foreign car becomes empty on any given road, that carrier attempts to load the car to—or in the direction of—the owning road. But if no load is available the holding carrier generally moves the car empty to the nearest junction point with the "home" road, provided the two roads connect physically. However, under Rule 3 of the Code of Car Service Rules of the Association of American Railroads, if the holding road has no direct connection with the owning road, and no load is available, the car normally is returned empty via the so-called service (or "home") route it took loaded in getting to the destination carrier. (So-called "Rule 3" cars are the subject of all short routing arrangements.)

An empty car traveling in this manner is said to be moving on "record rights." Frequently, such record rights involve circuitous movement, costing the handling roads money and producing no service. It is to eliminate this waste transportation that short routings have been set up. Short routing, naturally, makes the greatest savings during periods of car surplus, because when car supply is tight the empty mileage is relatively low.

There are two general types of short routings. The more frequently used is known as "reciprocal." The second, of which there are only two instances, are area

plans, the New England and Southwestern short routing plans. There are local short routing plans at St. Louis and Chicago which are designed to dispose of cars in those areas when home routing is circuitous.

In simple terms, reciprocals are agreements between two connecting roads to interchange empty cars of certain foreign ownership at certain points. Thus the Erie, for example, at Marion, Ohio, and North Judson, Ind., will accept from the Chesapeake & Ohio empty cars of these roads: Pittsburgh & Lake Erie; Pittsburgh, Mc-Keesport & Youghioghney; Santa Fe; North Western; Milwaukee; Great Northern; Northern Pacific and Union Pacific; while the C. & O. in turn accepts from the Erie, at the same junctions, cars of the Ann Arbor; Atlantic Coast Line; Louisville & Nashville; Norfolk & Western; Clinchfield; Norfolk Southern; Richmond, Fredericksburg & Potomac; Seaboard Air Line; Southern; Virginian and Western Maryland. Frequently such arrangements are set up on the basis of each road exchanging with the other an equal number of cars. Sometimes, however, mileage settlements are made between the roads involved in such agreements. Under this latter arrangement, each road keeps a record of the number of cars (out of route) handed over to the other. Empty mileage hauled by each is matched and generally one roads ends up "in debt" to the other for having run up a smaller empty car mileage. Then, to restore the balance, sometimes only the creditor line short routes via the appropriate junctions until the two parties are "square," when they will start all over again.

As an example of what can be saved through short routing, one "side" of a short routing agreement between the New York Central and Pennsylvania can be used. Under this agreement the New York Central will turn over to the P.R.R. either at Newberry Junction, Pa., or at Jersey City, N.J., out-of-route cars belonging to the Atlantic Coast Line; Seaboard Air Line; Norfolk Southern; Richmond, Fredericksburg & Potomac; Canton; Conemaugh & Black Lick; and Maryland & Pennsylvania. The N.Y.C., on the other hand, will accept

AN EXAMPLE—
CANADIAN PACIFIC CARS SHORT ROUTED VIA B. & M.
BY N.Y.N.H. & H. AT \$8.20 PER CAR

For	8 Mos. Nov	. 1950	Per	June
Account	through Jun	e 1951	Mo.	Only
C.N.JC.R.P.	85		10	6
D.L. & W.	136		17	8
ERIE	144		18	12
L.V.	125		16	6
N.Y.C.	56		7	4
P.R.R.	223		28	25
	_		_	_
	769		96	61

Cost of short routing:

769 cars x 164 miles each x .05=\$6,305.80, which was prorated among service route roads west of the Hudson,

Service routes on these cars vary greatly. Spot checks show many left the home road via Delson, Que., Welland, Ont., and Detroit, with some leaving via home road junctions west of Detroit. A fair estimate of service route mileage, car service officers state, would be at least 500 miles per car, or about 394,500 miles. This at \$.05 per mile indicates an aggregate cost of about \$19,725. The saving, therefore, in short routing was in vicinity of \$13,419.20, or \$17.45 per car.

The New Haven delivers the cars to the B. & M., which returns them to the Canadian Pacific at Wells River, Vt. The B. & M., for performing this work, bills the roads which are a part of the service route. The New Haven does not participate in the billing because its haul in delivering the empty C.P. cars to the B. & M. is about the same as the haul in returning the cars in service route to roads west of the Hudson river.

from the Pennsylvania at the same junctions cars of the following ownership: Boston & Maine; Maine Central; Bangor & Aroostook; Central Vermont; New York, Ontario & Western; and Rutland. Even in a period of car shortage, such as there was from February through April, 1951, the short routing resulting from this agreement saved considerable money. For example, in those months the N.Y.C. short-routed 40 cars to the Pennsylvania, saving 16,036 miles. At \$.05 per mile, the accepted cost of hauling an empty car one mile, a total of \$801.80 was saved.

Essentially there is little difference between the reciprocal agreements and, for example, the New England plan, except that regional plans have a much larger scope. In the New England arrangement participating roads are divided into three groups: (1) New England roads—Boston & Maine, Canadian National, Central Vermont, Delaware & Hudson and the New Haven; (2) bridge lines west of the Hudson river which are parts of New England through routes—the Lehigh & Hudson River, Lehigh & New England and New York, Ontario & Western; and (3) trunk-line carriers west of the Hudson—Central of New Jersey; Central of Pennsylvania; Delaware, Lackawanna & Western; Erie; Lehigh Valley; New York Central; Pennsylvania; Baltimore & Ohio and Nickel Plate (the latter two participating only in one phase of the plan).

The New England plan was set up primarily to take care of cars which enter the New England area loaded, and after being unloaded were reloaded to places on Group C roads or to other carriers in the area east of the Mississippi river and south of the Potomac. After being unloaded at such destinations, with no possibility of being loaded in the direction of the owning road, the only thing for the holding carrier to do before this

plan went into effect was to route the cars back to the owning road via the service route (i.e., back through New England) or to apply Rule 5 of the Car Service Rules. (Rule 5 provides that the holding carrier can disregard the service route and route a car to the owning road, or to some junction at which it may pick up its service route, but must pay \$.05 per mile—minimum \$5.00—to each road-haul carrier taking part in the empty movement.) Now, if such a situation occurs, short routing is resorted to, with consequent savings to everyone.

Under this plan, the New England roads will load Rule 3 cars out of that territory via their inbound service route whenever possible. The New England roads and the bridge lines also are obligated to advise the trunkline carriers, at the earliest possible moment, of the service route of Rule 3 cars loaded "out of route" to destinations on those roads, so that the trunk line may arrange for short routing these cars without delay. The trunk-line carriers also agree not to return to the bridge lines or the New England roads cars of Allegheny, Pocahontas, Southern or Western group owners, when it is practicable to short route them. Cars whose service route involves a road haul on one or more of the New England roads are to be short routed by Group B and C roads to pick up the service route outside New England, under Car Service Rule 5, i.e., at a reciprocal rate of \$.05 per mile, plus any switching charges accruing to switching roads which do not take part in the line haul. The expense of this handling is prorated among the carriers taking part in the service route. Thus, the only difference between this latter a .. angement and short routing under a straight Rule 5 application, is that now the carriers which participated in the loaded haul, and will be saved the empty haul, help bear the expense of the empty movement.

As a specific illustration of the way this arrangement works, suppose C.R.I. & P. 24299 shows up as a surplus empty on the D. & H. at Binghamton, N.Y. The car was delivered to the D. & H. at Mechanicville by the B. & M., so the D. & H. asks the B. & M. for the service route. It turns out that the car had record rights via the D. & H. to Mechanicville, B. & M. to White River Jct., Vt., C.V. to East Alburgh, Vt., C.N. to Port Huron, Grand Trunk Western to Chicago. The D. & H. then short routes the car via the Erie to Black Rock, N.Y.; the C.N. accepts it there and moves it to Hamilton, Ont., where the car picks up its service route back to

The Erie, for performing the service, bills the D. & H. for the 217-mile haul at a rate of \$.05 per mile, or \$10.85. The D. & H. then prorates this charge among the roads in the service route, as follows:

Road	Miles Per Cent Amt
D. & H	148 18.9 \$2.05
B. & M	174 22.3 2.42
C. V	133 17.0 1.84
C. N	327* 41.8 4.54
Total	782 100.0 \$10.85

<sup>\*</sup> Mileage from East Alburgh to Hamilton minus miles from Black Rock to Hamilton.

The cost of handling via the service route, as far as Hamilton, would have been about \$39.10 (782 mi. @ \$.05 per mi.). Thus a saving of approximately \$28.25 was made.

The Southwestern plan for short routing of empties works somewhat differently, in that no money changes hands. "Settlements" are on a mileage basis. The Southwestern roads short route freely, with the idea of getting the empty car to its owner, or the service route, whichever is the closer of the two, with the shortest haul possible. All 18 roads participating in the plan keep track of the cars they short route, and at the end of

each month advise the Dallas district office of the Car Service Division of their short routing activities. That office then prepares a list of debit and credit miles for all roads participating. If it turns out that one road is doing more than its share of hauling empties, instructions are issued to the other roads-or road-to stop short routing via the creditor line until the latter gets "even."

In the period September 1, 1945, to December 31, 1950, the 18 roads participating in the plan reported that they had short routed 16,147 cars, saving empty hauls of 6,592,000 miles, for a saving of about \$329,600. This saving is entirely aside from those made under the

Southwestern roads' reciprocal agreements.

At present the Car Service Division is working out details for a system of "automatic short routing." Under such a plan each principal road would be provided with a list of junctions and connections through which it would be permitted to dispose of empties, of specified ownership, of non-direct connections. The principle on which this system would work is that the number of empties disposed of through any gateway should approximate the number of loads received by that road through the same gateway. It is expected that details of this proposal soon will be worked out. Then, if it is approved by the various A.A.R. committees having to do with the subject, it probably will be given a trial period before final adoption. The trial period may disclose a necessity for some revisions. If such a plan succeeds, the regional plans and many reciprocals probably will be things of the past.

Four regional groups of car service officers, plus the district managers of the Car Service Division, administer these regional short routing agreements. Reciprocals between individual roads are handled by the car service

or transportation officers of those roads.



Teletype plays a large part in short routing. Teletype advice as to service routes enables holding roads to short route cars quickly, cutting down per diem and total expenses

#### TABLE I-SHORT ROUTING BY THE DELAWARE & HUDSON; FEBRUARY 1949

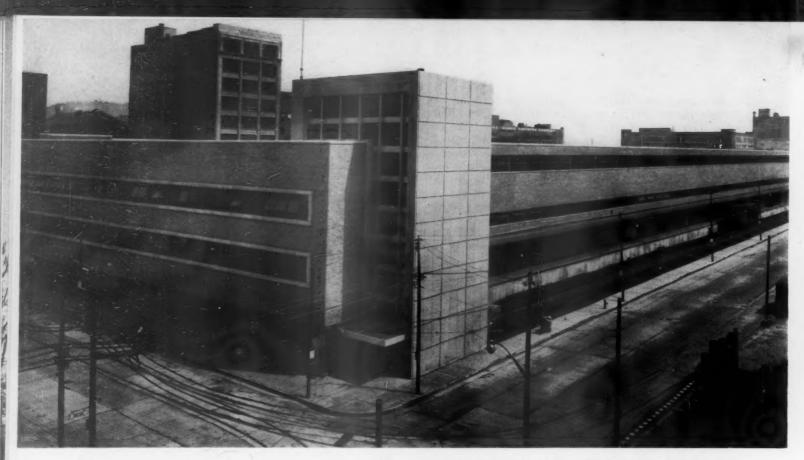
No. of	Per Cent of					MILES SA	VED BY			
Cars	Total	Disposition	D.&H.	B.&M.	N.H.	D.L.&W.	ERIE	L.V.	P.R.R.	TOTAL
47	37.0	To B.&M. Mechanicville in home route								
4	3.2	Short routed to C.R.P. Wilkes-Barre	844	468	512					1,824
3	2.3	Short routed to D.L.&W. Scranton	594	351	525	174				1,644
6	4.7	Short routed to Erie Carbondale	1,053	351 702	1,050 384		600			3,405
3	2.3	Short routed to L.V. Wilkes-Barre	628	351	384		-40	528		1,891
50	39.4	Short routed to N.Y.C. Schenectady	850	1,200						2.050
14	11.1	Short routed to P.R.R. Buttonwood	2,528	1,638	1,792				980	2,050 6,938
127	100.0		6,497	4.710	4,263	174	600	528	980	17,752
					,	** *	-	0.20		.,,

## TABLE II—AVERAGE MILES AND PERCENTAGE TOTAL MILES EARNED BY EACH MEMBER OF THE SOUTHWESTERN SHORT ROUTE PLAN—FROM JANUARY 1, 1939, TO OCTOBER 1, 1944

	Actual*	Debit	No.	Average	Miles	Credit	No.	Avg.	Miles
Road	Miles	Miles	Cars	Actual	Debit	Miles	Cars	Miles	Saved
	1	2	3	4	5	6	7	8	9
	2,550,139	1,302,296	3351	761	389	1,109,206	2685	413	1,247,843
B.R.I	85,314	34,543	545	156	63	40,342	286	141	50,771
C.B.&Q	831,059	354,134	1379	602	257	377,243	823	458	476,925
	2,254,100	1,134,540	3707	608	306	1,041,396	2564	406	1,119,560
C.&S	412,013	195,268	1175	350	166	324,151	1410	230	216,745
	670,650	322,181	2203	304	146	355,165	1097	324	348,469
G.C.L		127,188	1252	193	102	190,839	826	231	114,915
I.C	905,402	442,149	1789	506	247	530,341	1848	287	463,253
IG.N		137,450	1157	263	119	92,196	402	229	167,856
K.C.S		312,112	1451	466	215	282,397	540	523	364,072
L.&A		240,049	2378	266	101	120,939	458	264	394,431
M.P	2,846,177	1,366,535	5423	524	252	1,412,401	4464	316	1,479,642
MKT	825,510	419,838	1493	552	281	424,876	889	478	405,672
S.L S.F	1,065,113	557,343	2020	527	276	607,556	1269	479	507,770
S.L.S.W	1,128,468	600,466	2644	426	227	624,453	1544	404	528,002
T.&N.O	1,346,577	646,659	2505	537	258	612,030	1324	462	699,918
T.&P	890,101	512,887	2509	354	204	447,213	1991	225	377,214
M.&A. **	11,738	5,908	46	255	128				5,830
T.M	5,089	2,563	45	113	57	****			2,526
TOTAL	17,685,523	8,714,109 side the plan 231,3				8,592,744			8,971,414

<sup>\*&</sup>quot;Actual Miles" means the number of miles the A.T.&S.F., for example, would have had to haul cars if they were sent home via service route.

\*\*Missouri & Arkansas — now abandoned.



The west end of Building No. 1, facing Twelfth street, contains space at street level for seven retail stores. The cross street is Liberty avenue

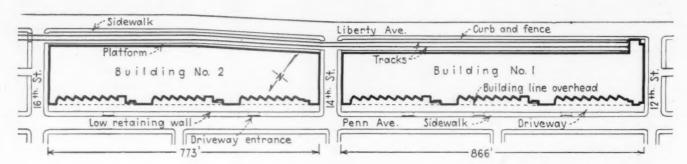
## New Warehouse Reflects Modern Trends

Functional arrangement plus attractive appearance are features of large structure built by the Pennsylvania at Pittsburgh

That railroad warehouses, like all other types of railroad facilities, are appropriate subjects for modern functional architectural design is indicated by a structure of this type recently completed at Pittsburgh by the Pennsylvania. In it have been incorporated every modern design feature and appurtenance for enhancing its value and effectiveness to the concerns using it. Fireproof construction; ample ceiling height in the warehouse areas; modern, well-lighted office space for ten-

ants; the latest devices for protecting warehouse goods against damage and theft; sawtooth-type truck-loading platforms, some with self-leveling ramps to permit them to be adjusted to trucks of different heights; and an attractive overall appearance—these are some of the outstanding features of the new structure.

The need for the new warehouse arose when it became evident that the existing facility, situated at the "Point"—the local designation for the area where the



The new warehouse actually consists of two buildings separated by Fourteenth street



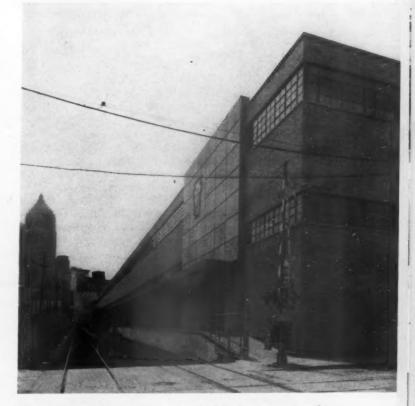
Looking east along the Penn avenue (north) side of Building No. 2. The mezzanine level is cantilevered out over sawtooth truck-loading platforms

Allegheny and Monongahela rivers join to form the Ohio—would have to be torn down to make way for a civic improvement program sponsored by the Pittsburgh Regional Planning Association. Built at a cost of about \$5,000,000, the new warehouse is adjacent to and on the north side of the Pennsylvania's passenger-station area at Pittsburgh. Known as the Pennsylvania-Duquesne warehouse, it has been leased by the railroad to the Pitt-Penn Terminal Company. Aside from its modern construction, the new warehouse has the advantage of offering a considerably larger amount of tailboard space and a private flanking drive of such width as to permit greater maneuverability of trucks.

Containing a total usable floor area of 405,100 sq. ft., the new warehouse is a long, narrow structure flanked on the south, or passenger-station, side by Liberty avenue and on the north side by Penn avenue. It extends from Twelfth street on the west to Sixteenth street on the east. Actually, since it was necessary to keep Fourteenth street open between Penn and Liberty avenues, the warehouse consists of two separate buildings divided at that street. The westerly portion (between Twelfth and Fourteenth streets) is known as Building No. 1, and the easterly portion (between Fourteenth and Sixteenth streets) as Building No. 2.

#### Served by Two Tracks

On the south side the warehouse is flanked by two tracks which approach from the east and terminate near its west end. A canopied platform 8 ft. wide extends along practically the entire length of the south side of the warehouse, with ramps down to the street level at Fourteenth and Sixteenth streets. The north frontage of the warehouse is devoted largely to sawtooth tailboard space flanked by a private driveway, which is separated from Penn avenue by a low retaining wall. Building No. 1 has 27 truck-loading spots and Building No. 2 has 24. Three of the truck-loading spots in each build-

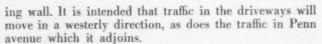


The truck and platform layout on the Liberty avenue (south) side of the warehouse as seen from Fourteenth street, looking west toward Twelfth street

ing are equipped with hydraulically operated tilting loading ramps which can be adjusted to permit loading trucks of different tailboard heights. The truck driveway flanking each building may be reached either from the cross street at the east end of each structure or from three intermediate driveway entrances through the retain-



The warehouse space on the second floor of Building No. 1 has a clear minimum height of 16 ft.



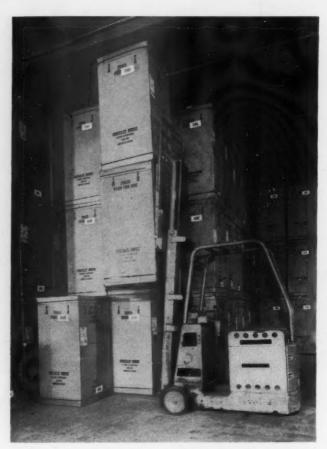
Building No. 1, a two-story structure, has an overall length of 866 ft. and an average width of 143 ft. At its Twelfth Street end space has been provided at the ground level for seven retail stores, each about 22 ft. wide and 36 ft. deep. These may be used as single units or in multiples. At the mezzanine level on the Penn avenue side of this building, and at the Twelfth Street end also, there is practically a continuous line of offices for the use of tenants of the warehousing company.

#### **Cantilevered Over Platforms**

The first floor of Building No. 1 has a clear minimum height of 20 ft. 5% in. from the floor to the undersides of the ceiling beams. The second floor has a clear minimum ceiling height of 16 ft. Six freight elevators are provided for transferring goods between the first and second floors of this building.

Building No. 2, a single-story structure, has an overall length of 773 ft. and an average width of 153 ft. The clear minimum ceiling height of the warehouse area in this building is 21 ft. 73/4 in. This structure also has a line of offices at the mezzanine level along the Penn avenue side. In both buildings those portions above the mezzanine floor level are cantilevered out over the sawtooth platforms to provide protection for the truck-loading operations.

Building No. 1 has five entrances, three on Penn avenue and one each on Twelfth street and Fourteenth street. Building No. 2 has four entrances, three on Penn avenue and one on Sixteenth street near Penn avenue.



The handling and stacking of merchandise in the new warehouse is highly mechanized

Each of the intermediate building entrances on Penn avenue is built in connection with a stairway tower that projects slightly above the building parapets. At the first floor level in each of the stairway towers a lunchroom, a locker room, and toilet and wash facilities for warehouse employees are installed, along with an office for the warehouse superintendent. At the mezzanine level in each of the stairway towers is a large office room and toilet and rest-room facilities for office personnel.

The entrance of Building No. 1 on Twelfth street is at the southwest corner adjacent to Liberty avenue. This entrance is incorporated in a tower that projects about 15 ft. above the building proper and is designed to house an elevator if it becomes desirable to install one in the future.

#### Type of Construction

The new warehouse is of concrete, brick and steel construction, with practically continuous bands of steel sash in the side walls at both the mezzanine and second-floor levels in Building No. 1 and at the mezzanine level in Building No. 2. The first floor in both buildings is designed for a live load of 350 lb. per sq. ft., while that of the second floor of Building No. 1 is designed for a live load of 250 lb. per sq. ft. The roof of Building No. 1 consists of lightweight roof slabs covered with composition roofing. The roof of Building No. 2 is of precast concrete slabs covered with insulation and composition roofing. On both the track and tailboard sides of the warehouse access to and from the loading and unloading platform is provided by steel and glass vertical sliding doors. Each building is divided into three sections

by 13-in. brick firewalls, each fitted with one or two steel fire doors. Lighting and heating facilities in the building are designed to suit the areas served. The warehouse storage areas, the railroad unloading platforms and the truck loading docks all have mill-type incandescent fixtures, while the office areas have fluorescent-type ceiling lights. Incandescent ceiling lights are provided in the toilet and locker rooms, and recessed incandescent fixtures in the stairwells.

The warehouse storage areas and the mezzanine offices facing Twelfth street are heated by steam unit heaters. All mezzanine offices along Penn avenue have radiant heating by means of wrought iron pipes imbedded in the floors, while the stairwells and toilets have hot water radiators. When completed the stores along Twelfth street will have unit-type air conditioners.

#### **Dry-Pipe Sprinkler Systems**

Both buildings are protected with dry-pipe sprinkler systems which have an approximate total of 5,025 sprinkler heads. Also, two connections are provided at each building for use of the city fire department. The sprinkler system in each building is supplied with water from two separate city mains. Suitable alarm bells, valves, pits, drains and test connections are included in the fire-protection system, and the system is supervised by direct wire to the ADT Company.

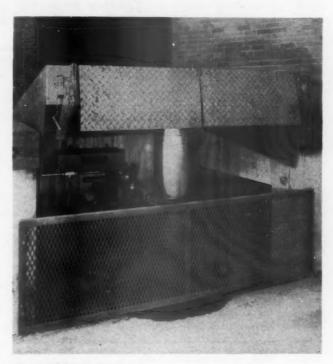
The exterior appearance of the buildings is greatly enhanced by the architectural treatment given the stairway towers. The dominant feature of the exterior in this respect is the tower at the corner of Twelfth and Liberty avenues, which is faced with Indiana limestone, with large areas of plate glass with aluminum sash and trim. The towers fronting on Penn avenue also are faced with Indiana limestone and the entrances adjacent to them are marked by large areas of glass with aluminum sash and trim above marble curtain walls.

#### Modern Materials in Offices

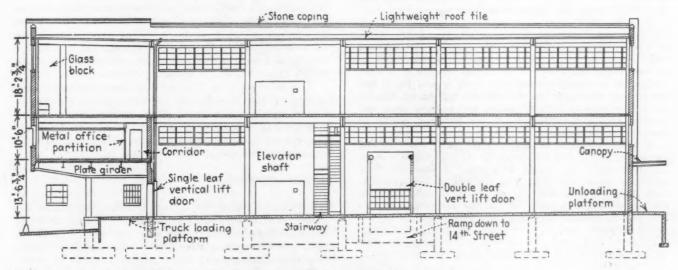
All mezzanine offices in the buildings have glazed tile walls and asphalt tile floors. Steel and frosted glass partitions separate the offices from the corridor that extends the length of each building. The corridors also have tile walls and asphalt tile floors, and are lighted by fluorescent fixtures. Equipment in the employee facilities on the first floors includes Bradley washfountains, showers with tile walls and steel lockers.

The unloading, handling and loading of warehouse goods into street trucks is highly mechanized and palletized. For this purpose the warehouse company has acquired six fork-lift trucks, with two more on order, and 12 electric "walkies." Since large amounts of newsprint are currently being handled through the warehouse, special equipment has been obtained, and other units are on order, for unloading the rolls of paper from cars, stacking them in the warehouse and loading them into trucks. For transporting rolls of paper from the warehouse to the printshop three street trucks of special design are used.

The warehouse was designed and built under the general supervision of D. L. Sommerville, chief engineer of the Central region of the Pennsylvania. The actual design work was done by the engineering firm of Hunting, Larsen & Dunnells, Pittsburgh, while the general contractor was the Trimble Company, also of Pittsburgh.



Three of the sawtooth "spots" in each building are fitted with hydraulical tilting loading ramps adjustable to truck tailboard height



Typical cross section of Building No. 1, looking toward Fourteenth street

# What's This Tariff Research Program?

It's an undertaking to find out, particularly from the people who work with them, what's the mutter with railroad tariffs, and then to develop measures that will bring about a cure

> By CHARLES S. BAXTER Chairman, Railroads' Research Group

The Railroads' Tariff Research Group has received from the carriers' Administrative Committee these instructions: Find out what is giving trouble, what will cure it, and give us your recommendations.

Those are our complete instructions—in plain words. They demonstrate the absolute sincerity of the railroads in their undertaking to get to the heart of this problem.

We are set up to do basic research on freight tariffs with the expectation that out of that approach we will find the formulas to overcome many or most of the factors which are contributing to tariff complexity. Since the term "research" has probably not heretofore been associated with the form and substance of freight tariffs, a definition of what it implies might well be in order.

#### I.C.C. Will "Cooperate Fully"

"Mr. Baxter has shown me the outline of the program for research in the field of tariff simplification which the railroads have jointly undertaken, and has described to me the methods intended to be followed to obtain the ideas and the help of tariff users, both shippers and carriers.

"The desirability and need for such study and research are, I am sure, apparent to anyone who has had occasion to work with the tariffs presently in use. The program which has been formulated with that end in view seems to be well conceived, and if it is carried through to a conclusion, as it should be and as I trust it will be, I feel certain that the returns to the railroads will be substantial, not only in reduced costs of quoting and auditing rates, but also in the less tangible but not less important matter of improved public relations.

"I shall watch developments with much interest, and can assure you of the willingness of the commission's staff, and particularly our Bureau of Traffic, to cooperate fully with your group. Moreover, if it develops as the subject is more fully explored that any of our tariff rules stand in the way of simplification I am sure the commission will be prepared to consider suggestions for changes."

prepared to consider suggestions for changes."
—From an October 16, 1951, letter written by Commissioner J. Haden Alldredge to Fred Carpi, vice-president of the Pennsylvania and chairman of the railroads' Administrative Committee which is directing the research program.

First of all, it demands an organized program—a breakdown of the elements. That we now have (see page 76). Next, it calls for a study of the individual elements entering into the broad field—a factual knowledge of their beginning and the factors which have shaped their chronology, a survey into their effectiveness in practice, and, finally, an appraisal of their worth. This is precisely the technique we are following—digging down to the roots and working up.

#### The Program

As the program itself reveals, the first section treats primarily with form and arrangement; the second with substance, i.e., the statement of rates and provisions allied closely thereto. The third section is an objective study of tariff-making rules; while the fourth takes up matters of form and substance with reference to tariff schedules covering miscellaneous and special services. With the advice, spontaneously given or solicited, of freight tariff users, we will erect the pattern of a standard tariff which goes as far as all elements will permit in enabling a tariff user to develop rate information with the least number of essential steps, within the shortest period of time, and with the greatest assurance of accuracy. Obviously we cannot make detours on the way in dealing with individual items of tariff complexity which may be brought to our attention.

At this stage it is impossible to say how soon these studies will be concluded. All elements in the outline are connective, and one feature cannot be fixed with disregard of its neighbor. All persons close to the problem realize it must be done this way if it is to be done thoroughly and well.

#### Comments Invited

On many phases of the program, particularly the section dealing with form arrangement, we must assemble the criticisms, views, prejudices, preferences, and experiences of representative bodies of actual tariff users. We invite comments of this kind.

Additionally, we are applying the opinion research







THE RAILROADS' TARIFF RESEARCH GROUP—Chairman Charles S. Baxter (left), G. W. Lupton, Jr., and H. F. Sutter (right) members—has developed a comprehensive tariff research program

technique by sampling for the views of tariff users on specific questions. To develop the viewpoint of tariff users employed by shippers, we will direct questionnaires to the membership of the National Industrial Traffic League, or at least a representative segment of it. We will direct the same questionnaires to: Thirty railroad local freight stations-10 in the East, 10 in the West, and 10 in the South; 15 railroad accounting departments-five in each territory; nine principal railroadsthree in each territory; and the traffic departments of the three major freight associations. Thus we will hear from the rate men in industry, billing clerks at the local freight stations, the man who audits waybills, and the man who settles overcharge claims—as well as men in railroad freight traffic departments who use tariffs to quote rates or to make them.

It should be emphasized that, in all cases, these questionnaires will not be directed to the "front office," but to the tariff users out in the work rooms who spend eight hours or more per day thumbing the pages of tariffs in search of applicable rates and other provisions. We will get the "front office" viewpoint, too, but alongside that we want the free expressions of the individuals who make their living checking tariffs day in and day out.

From these expressions we will know what arrangement, or what style, will work best in enabling the man on the firing line to increase his productivity, quantitatively and qualitatively.

We are acutely aware of the extraordinary burden of complexity imposed upon freight tariff users by the master tariffs stating the postwar general increases and by the dual system of class rates resulting from the interim decision of the Interstate Commerce Commission in Docket 28300. Tariff complexity has been vastly increased by reason of these two developments, but they are temporary factors.

The final decision in Docket 28300 has been rendered and the class rate debacle will be passing from the scene in the foreseeable future. As to the general increases, these are being picked up rapidly by inclusion in the basic rates and the time is not far away when this important element of complexity will disappear. Hence,

### N.I.T. League Will Give Program "Enthusiastic Approval"

"The chairman of the Railroads' Tariff Research Group has made available to me a copy of the program for tariff research, and he and I have gone over it in considerable detail.

"As chairman of the Committee of Rate Construction and Tariffs of the National Industrial Traffic League which is cooperating with your committee and the Research Group I am impressed with the comprehensive character of the research program. Our committee, and the league as a whole, is certain to accept this detailed program with enthusiastic approval.

"The program calls for the minute study of every basic element of the tariff structure—including both form and substance—and if followed through, as I am sure it will be, this approach is bound to be highly productive. We will keep in close touch with developments, and be ready at all times to be of assistance."

—From an October 18, 1951, letter written by J. W. Peters to Chairman Carpi of the railroads' Administrative Committee. Mr. Peters is traffic manager of the Delco-Remy Division of the General Motors Corporation.

we will not treat with these subjects, limiting our studies and recommendations to the basic elements of the tariff structure.

#### Atmosphere of Partnership Required

Since we are working to provide more productive and more efficient tools for tariff users, there must be a tangible and abiding atmosphere of partnership between our organization and tariff users everywhere. We are furthering the forging of the partnership principle through our advertising, our questionnaires, the publicizing of our detailed program, and in appearances before groups interested in the project. We will do our work in a "goldfish bowl"—where all can see, advise, and criticize.

We believe that the showing of the breakdown of our research program will prompt tariff users to be more



profuse and more specific in telling us how they feel, from experience, about this or that tariff feature. If, for example, a veteran tariff user has developed convictions about title pages, about the arrangement of rules, about cross-references and rate alterations, about routing or intermediate provisions, we want to hear

#### State Commissioners Vote to Name Cooperating Committee

"WHEREAS, the membership of the National Association of Railroad and Utilities Commissioners has been advised officially of the creation by the railroads of the United States, in cooperation with the National Industrial Traffic League, of an organization entitled "The Railroads' Tariff Research Group" to devote its full time to the simplification of railroad freight tariffs and,

"WHEREAS. a more orderly arrangement of railroad freight tariffs and simplification in the expression of rates and other provisions is definitely in the public interest,

BE IT RESOLVED, by the National Association of Railroad and Utilities Commissioners in annual convention assembled

"1. The Railroads' Tariff Research Group be advised of our interest in this project and of our determination to cooperate in achieving sound solutions, and

"2. That a special committee of five representing this association be appointed as a Tariff Simplification
Committee to cooperate with the Tariff Research
Group and serve as the channel of communication
between the two organizations."

-Resolution adopted at the annual meeting of N.A.R.U.C., which was held recently at Charleston, S. C.

from him. We want to know about preferences and sentiments as well as anything else.

From our initial invitation we have had a great many fine letters. Most of them, however, are rather general in nature. Now that our program is published, we hope for a much more widespread and more specific response. In other words, we want to get down to cases and develop a cross-section of ideas in connection with the bits and pieces of the tariff structure.

#### THE PROGRAM FOR FREIGHT TARIFF RESEARCH

A-Tariffs in general.

- 1. Standardization of title page.
  - a. Matter to be included.
  - b. Arrangement of matter.
  - c. Description of application.
  - d. A system of numbering. e. Issuing officer or agent-single vs.
  - multiple.
- 2. Table of contents.
- 3. List of participating carriers, a. Use of standard abbreviations of railroad names vs. full corporate
  - b. Need "extent of participation" be shown?
  - c. Do numbers of concurrences and powers of attorney serve any needful or useful purpose? If so, is there a shortened or streamlined method by which the need could adequately be served?
  - d. Will simplicity be gained or promoted by a code of numbers in lieu of carrier names or abbreviations?
- e. Powers of attorneys and concurrences to bureaus instead of agents.
- 4. Subject matter preceding rate sections. a. Index of commodities.
  - b. Index of rules.
  - c. General application.

- d. Exceptions to general application.
- e. General rules.
- f. Definitions.
- g. Common or usual provisions.
- h. Reference to other tariffs.
- i. Interstate Commerce Commission service orders.
- j. Explanation of abbreviations and reference marks.
- k. Reference to Interstate Commerce Commission orders and special permissions.
- l. Individual lines' tariff numbers.
- m. Numbering of rules and items.
- n. Arrangement of narrative matter on page.
- o. General explanation of tariff arrangement.
- p. Geographical description of territory covered.
- Primary questions:
  - (1) Can a standard set of general rules and other common and essential provisions be devised?
  - Can some of these (e.g., f, i, j,) be carried exclusively in a single common publication such as the classification?
  - (3) Can all of these be standardized as to number and/or position in all tariffs?

- 5. Form.
  - a. Loose leaf vs. supplement type.
  - b. Standardization of typographical design and lay-out.
- c. Numbering of pages.
- 6. Language.
  - a. Simple narrative style vs. the traditional stilted style which leans heavily to the technical and legal side.
- 7. Symbols and reference marks.
  - a. Standardization.
  - b. Reductions in need for use.
- . Position in tariff for explanations.
- 8. Routing instructions.
- a. General and specific. ("Open" routing provisions.)
- b. Individual carrier exceptions.
- c. Routing symbols in rate items with explanations elsewhere.
- Standard position in tariffs.
- Separate routing tariffs vs. inclusion in rate tariffs.
- f. Variations in methods of stating.
- g. Gateway vs. interterritorial through routing.
  h. Internal routing schedules.
- i. Circuity limitations.
- j. Emergency routing clauses, k. Standard circuity rule.
- 9. Supplementation.
  - a. Numbering of supplements.
  - b. Volume of supplemental matter.
  - c. Cancellation of matter.

- d. Cumulative indexing.
- Blanket supplements.
- f. Revised pages.
- g. Suspension, postponement, vacating and cancellation supplement.
- h. Partial amendment of items.
- 10. Cross-referencing.
  - a. To other tariffs.
  - b. To other sections
  - To other provisions.
- 11. Commodtiy tariffs.
  - a. Specific for major commodity groups vs. use of general commodity issues.
  - b. Consolidation of general commodity tariffs.
- c. Grouping miscellaneous rates on same commodity.
- 12. Effective dates.
  - a. Scattering throughout month as against preference for first and middle of month.
- 13. Grouping of stations and rate basis
  - a. Alphabetical vs. geographical list-
  - b. The place for showing rate basis point or group.
  - c. Alphabetical arrangement by states vs. straight.
  - d. Geographical arrangement.
  - e. Rate basis points and numbers.
  - Separate issues for basing and rates.
- 14. Issuing source.
  - Central agency vs. individual line.
  - b. Reduction in number of issuing agents.
  - c. Overlapping by agents.
- 15. General uniformity of tariffs.
- 16. Numbering of stations for identification.
- 17. Consolidations and reductions in number of tariffs.
- a. Exceptions to classification.
- 18. Effective matter in partly cancelled tariffs.
- a. In connection with suspensions. 19. Graveyard items.
- 20. Tariffs of distances
- 21. Use of maps in tariffs.
- 22. Tariff indexes.
- 23. Expiration dates.
- 24. Uniform punching of filing holes.
- B-Matters in classifications and rate tariffs which make for complexity and uncertainty in rate ascertainment.
  - 1. Classification of commodities.
    - a. Descriptions (use of terminology largely familiar only to the particular trades).
    - b. Punctuation.
    - c. Qualifying or descriptive words.
    - Use of classification index to give effect to committee rulings.
    - e. Classification rules.
    - Classification exceptions.
  - 2. Commodity description.
    - a. Descriptions in commodity rate and classification exceptions schedules different from classification proper.
    - b. Use of terminology largely familiar only to the particular trades.
    - c. Punctuation.
    - d. Qualifying or descriptive words.
  - Uniformity of commodity lists or descriptions.
- 3. Expression of rates in units of weight or measurement.

- a. Per 100 pounds.
- b. Per ton of 2,000 pounds.
- c. Per ton of 2,240 pounds.
- d. Per gross ton same as net ton.
- e. Per car of given weight.
- f. Per car regardless of weight.
- g. Per cord of 128 cubic feet.
- 4. Alternation of rates.
  - a. Specific point to point vs. mileage.
  - b. Between different sections of the same tariff.
  - c. Between different tariffs.
  - d. Specific vs. maximum or minimum.
  - e. Alternating rates and minimumcarload; l.c.l.
  - f. Between class and commodity.
  - g. Between classification and exceptions ratings.
  - h. Domestic vs. export, import, coastwise and intercoastal.
- i. Through rates vs. aggregates of intermediate rates.
  - (1) Rule 56.
  - (2) Route of movement aggregate rule.
  - (3) Equalized routes aggregate rule.
- 5. Rules for application of rates at intermediate points.
  - a. Prevalence of Rule 27 type.
  - b. In "open" routing tariffs, Delmar
  - principle. c. In T/C 20 Rule 4(k) routing Plan 1 types. (Complete specific routing
  - instructed.) d. In T/C 20 Rule 4(k) routing Plan 2 types. (Statement that rates apply via all lines parties to tariff.)
  - e. In absence of internal routing when single carrier has more than one route between two points it serves.
  - f. Affecting points outside scope of tariff.
- 6. Routing instructions.
  - a. Are they checked and observed by:
    - (1) Shippers?
  - (2) Carriers?
- b. Do the ends justify the means?
- 7. Manifestations and influences of the Fourth Section and its administra
  - a. Routing.
    - (1) Circuity limitations.
    - (2) Minimum earnings.
  - b. Minimum rates.
- "Holding-out" rules.
- d. Rule 56.
- Combinations published as joint through rates with split minima or description.
- 8. The statement of rates.
  - a. Arrangement of items and rate tables.
  - b. Multiple rate sections in the same tariff.
  - c. Use of rate basis numbers instead of rates requiring reference to tables for rates in connection with commodity rates.
  - d. Mileage rates vs. point-to-point or group-to-group.
  - e. The statement of rate scales or tables in a single tariff or in the classification.
  - f. The group plan of stating rates. g. Individual carrier exceptions.
- h. Grouping of stations.

- 9. Use of the phrase, "Except where otherwise provided."
- C-1.C.C. Tariff Circular No. 20 and comparable tariff rules of state regulatory bodies.
- 1. A critical study to isolate obsolete and unnecessary rules.
- 2. A critical study to develop desirable additional rules.
- 3. A critical study to isolate rules, the difficulties in observance of which outweigh all possible value to the public in their retention.
- 4. A critical study to point up those rules which make for extravagance in volume of tariff matter, printing and compiling costs, and in the time of tariff users.
- As research demonstrates the need of treatment for individual rules, it is the plan to work out a suitable change with officials of the Bureau of Traffic, I.C.C. and, after approval by our authorities, pursue adoption of the change through the procedures set up in the Administrative Procedure Act. (State action similarly).

#### D-Special Services Tariffs.

- 1. Processing-in-transit or storage-intransit tariffs.
  - a. Statement of inbound articles.
- b. Statement of outbound articles.
- Statement of authorized processes.
- d. Statement of transit charges. e. Standardization of rules, regula-
- tions and processes. f. Out-of-line and back-haul rules and
- charges g. Essentiality of certain requirements and procedures. Streamlining of
- paper work. h. Inbound rate cut-back arrangements vs. through rate arrange-
- ments. Settlement plans and options.
- j. Outbound billing options.
- k. Consolidation and reduction in number of tariffs.
- 2. Diversion and reconsignment tariffs. a. Present points of difference in tariffs.
- b. Feasibility of single tariff for na-
- tional application. 3. Tariffs providing for stopping-in-transit to complete load or partly unload.
  - a. Present scope of applicability. b. Present point of difference.
- c. Feasibility of single tariff for national application.
- 4. Switching and terminal tariffs. a. Consolidated agency issues vs. individual lines' tariffs.
- 5. Demurrage tariffs.
- 6. L.C.L. pick-up and delivery tariffs. 7. Miscellaneous special services tariffs. a. Port services and charges.
- General Comment: Nowhere is simple clarity more badly needed than in the rules, regulations and other narrative provisions in these special services tariffs. Nationwide uniformity in many provisions is believed possible and is

patently desirable.



#### Inauguration of the Burlington's "direct route" between Kansas City and St. Louis has made possible expedited service which is attracting new traffic and revenue

In the two years since the opening of its "direct route" freight line between Kansas City and St. Louis, the Chicago, Burlington & Quincy has seen a substantial increase in its volume of through freight between these two important gateways. The opening of this new route also made possible marked improvements in through freight service between St. Joseph, Mo., and St. Louis which also have brought new traffic and revenue to the Burlington lines.

For years the Burlington had two routes between Kansas City and St. Louis, one via its own circuitous route through Cameron and Hannibal, and the other an interline service with the Alton (now Gulf, Mobile & Ohio) via Mexico, Mo., as shown in the accompanying map. Effective September 26, 1949, the Burlington obtained trackage rights over the Gulf, Mobile & Ohio between Kansas City and Mexico, and transferred all of its through Kansas City-St. Louis service to this new route

The opening of this new fast route between Kansas City and St. Louis via Mexico, Mo., and the improvements which it made possible in the St. Joseph-St. Louis service via the old route through Palmyra and Cameron, are the outgrowth of the Burlington's desire to improve its share of the traffic between these important gateways in the face of a number of difficulties.

One problem was the fact that a large portion of the available and potential traffic between these cities is "bridge" traffic between points east and southeast of St. Louis and points southwest, west and northwest of Kansas City and St. Joseph, or vice versa. The leaving

This article deals solely with the Burlington's service between Kansas City-St. Joseph and St. Louis. The service to and from Chicago—although it uses much of the same trackage west of Palmyra and is closely integrated with the St. Louis service—is another story which will be told here when improvements now in process are completed.

# New Route and

and arrival times of the important western connections at Kansas City and at St. Joseph varied in such manner that the Burlington could not operate a single train between Cameron and St. Louis, handling both Kansas City and St. Joseph cars, and still maintain close connections at both cities.

For a good many years the Burlington participated in the interline service between Kansas City and St. Louis via the Alton, referred to above. This interline operation required a change of power and crews at Mexico, as well as a complete inspection of the train. Considerable switching was also necessary to combine the Burlington's St. Louis traffic with the Alton's traffic to or from points east of Mexico. As a result, although this route was shorter than the Burlington's own line, schedules were relatively long and performance poor. And in addition, each road preferred to handle traffic over its own circuitous Kansas City-St. Louis route—the Alton by way of Roodhouse, Ill., and the Burlington by way of Cameron and Hannibal-rather than divide the revenues via the shorter interline route. These conditions produced a gradual diminution of traffic over the interline route to the point where, in 1946, through freight had to be handled by what amounted to connecting local trains. The Burlington then switched its entire solicitation effort to its own longer route via Hannibal and Cameron.

In handling Kansas City-St. Louis traffic via this longer route, Kansas City cars were handled on St. Joseph-St. Louis trains because there was insufficient volume to justify operating separate trains. This meant that the eastbound train had to be scheduled to connect with the latest arrivals from the west—which happened to be at St. Joseph—with the result that Kansas City cars had to wait extra hours before starting east. And westbound, the train had to be scheduled for the first westbound departures—which happened to be at Kansas City—with the result that St. Joseph cars had to leave St. Louis earlier, and lay over in St. Joseph. This service was also integrated with schedules to and from Chicago—thereby adding further complications.

With the rapid industrial and economic development of the West and Southwest in recent years, Kansas City The Burlington's new
"Direct Route" between Kansas City
and St. Louis makes
possible faster, better-timed freight service between these
important gateways
(facing page)

The Burlington's modern Murray Yard in Kansas City, western terminus of the new Kansas City-St. Louis "Direct Route" (shown at right)



# Fast Service Attract More Traffic

and St. Joseph have been increasing in importance as gateways for this growing area. The opportunities for offering the needed improvements in service to both St. Louis and Chicago traffic via its circuitous route through Hannibal were restricted by the physical limitations of the single-track line between Palmyra and Kansas City-St. Joseph—particularly west of Brookfield and south of Cameron. The operation of the additional trains required over this route would have posed a difficult operating problem.

To correct this difficulty, the first move was to seek a new, direct and fast route between Kansas City and St. Louis which would both permit better service and would remove this traffic from the line through Cameron and Hannibal. The second move—which is now nearing completion—was to undertake a comprehensive physical improvement of the line between Palmyra and Brookfield. The projection of a new cutoff between Kansas City and Brookfield—removing this traffic from the old line—eliminated the need for extensive rebuilding of the difficult line west of Brookfield, especially between Kansas City and Cameron.

To obtain a new, direct and fast route between Kansas City and St. Louis, the Burlington turned back to the old short interline route via Mexico, Mo. This time, however, it sought and obtained trackage rights from the Gulf, Mobile & Ohio between Rock Creek Junction (Kansas City) and Mexico. With the new trackage rights, the Burlington can now operate its own trains—using its own motive power and crews, and retaining all the revenue—through from terminal to terminal, thereby permitting better scheduling and greatly improved running time.

In obtaining the trackage rights, the Burlington agreed to assist the G.M. & O. in accomplishing further improvements to its track between Kansas City and Mexico, raising it to higher heavy-duty, high-speed standards. A pro rata share of this improvement cost is being paid by the Burlington as a part of its regular rental and use fees. New 112- and 115-lb. rail is being laid, with ties renewed where necessary, and the entire line being raised 4 to 6 inches on new chat ballast. Centralized traffic control is being installed between Kansas City

#### **SCHEDULES**

St. Joseph

KANSAS CITY-ST. LOUIS "DIRECT ROUTE"

		140. 03	140. 03
		Daily	Daily
East St. Louis	Lv.	6:30 a.m.	8:30 p.m.
St. Louis (by shuttle connection)	Lv.	6:30 a.m.	9:00 p.m.
Kansas City	Due	6:00 p.m.	7:30 a.m.
		No. 64	No. 60
		Daily	Daily
Kansas City	Lv.	7:00 a.m.	7:00 p.m.
East St. Louis	Due	6:00 p.m.	6:15 a.m.
St. Louis (by shuttle connection)	Due	6:00 p.m.	5:30 a.m.
ST. JOSEPH-ST. LOUIS		No. 68	
		Daily	
St. Joseph	Lv.		
St. Louis	Due	6:00 p.m.	6:15 a.m.
East St. Louis (by connection)	Due	6:30 p.m.	7:00 a.m.
		No. 61	
		Daily	
East St. Louis (by connection)	Lv.	8:30 p.m.	
St. Louis	Lv.	9:30 p.m.	

and Slater, Mo., existing block signals from Slater to Clark are being modernized, and completely new block signals are being installed between Clark and Mexico.

Due 10:15 a.m.

With the opening of this new route to service on September 26, 1949, the Burlington inaugurated four completely new time freights. Inasmuch as the Burlington's trackage rights between Kansas City and Mexico give it the right to operate through trains only (local service between Kansas City and Mexico being handled exclusively by the G.M. & O.), these new time freights operate on fast non-stop schedules. The Burlington has continued its daily accommodation train between St. Louis and Mexico to handle local freight traffic to and from intermediate points in that territory as well as interline freight to and from the G.M. & O. In another move designed to speed the movement of these new trains,

No. 65



Carefully timed shuttle connections between West Alton and St. Louis, and between West Alton and East St. Louis, make

possible equally fast, well-timed service to both sides of the Mississippi at St. Louis

the Burlington operates the same caboose through between Kansas City and East St. Louis, without switching out at the intermediate crew terminal of Mexico—as was regular operating practice heretofore.

The new Kansas City trains—which have been developing excellent "on-time" performance—are operated on the schedules shown in the accompanying box and run through to East St. Louis, using the Burlington's own line crossing the Mississippi at Alton. The connection into St. Louis is provided by shuttles to and from West Alton operated for this sole purpose, affording regular and consistent connections in both directions.

The "direct route" trains handle only Kansas City local traffic, and traffic to and from western and southern connections at Kansas City. St. Joseph traffic is not handled through Kansas City, because of the switching delays, and because better schedules and connections are possible by means of an independent operation through Cameron.

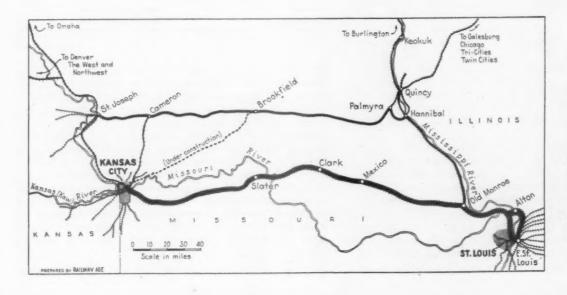
#### Improved St. Joseph Service

St. Joseph-St. Louis trains are now faster, and are operating on schedules timed to provide best possible connections at St. Joseph. These new schedules have made possible later closing and earlier delivery times at

St. Louis and East St. Louis. Improvement in this service over the old line is an important by-product of the new "direct route" between Kansas City and East St. Louis. And still further improvements will be forthcoming when the new expedited Kansas City-Chicago service is inaugurated next year via the Brookfield cutoff.

The St. Louis-St. Joseph trains now operate non-stop between West Alton, Mo., and Hannibal, where they set out and pick up cars to and from Galesburg and all points reached via Galesburg—including Chicago, Minneapolis, St. Paul, Rock Island, Davenport, Moline, etc.—and for Quincy and points north via the river division. These cars are all blocked in the train, so this setout and pickup normally requires less than one hour. The trains then operate non-stop between Hannibal and St. Joseph with local traffic for intermediate points.

All of the St. Joseph trains operate into and out of St. Louis. No. 72's cars to south and eastbound connections to East St. Louis are handled by a second section which originates at Hannibal and operates directly into East St. Louis by way of the Burlington's bridge at Alton. No. 68 has a shuttle train connection from West Alton to East St. Louis. North and westbound, local train No. 71 originates in East St. Louis and operates directly into Hannibal on a non-stop schedule, where the East St. Louis cars are switched into No. 61.



The Burlington's new "Direct Route" between Kansas City and St. Louis via Mexico is shown as the heavy line on this map. Operation between Rock Creek Junction (Kansas City) and Mexico, Mo., is by Burlington crews and power over Gulf, Mobile & Ohio tracks. Between Mexico and St. Louis, the operation is over the Burlington's own tracks

# PERSONNEL RELATIONS OPPORTUNITIES in the Railroad Field

How the Western Pacific has demonstrated that a real personnel program embraces much more than labor relations

I would be the first to acclaim the outstanding improvement in performance that has taken place on the railroads over the past 15 or 20 years, but in my view there isn't any railroad in the country, including the Western Pacific, that is doing what it should be doing to contribute an outstandingly efficient job. I believe that most top management men will agree with that statement. . . .

There is tremendous room for improvement in the operation of the American railroads. I believe that the answer lies in directing greater attention towards the development of a more skillful, better trained, and fully satisfied work force. I believe that this could be accomplished by vigorous prosecution of a well-rounded personnel program, properly supported by top management. I am not sure that top management has in every case indicated its own keen personal interest in a real personnel program. Such an interest is vital if the program is to succeed. Such an interest must be sincere, and must spring from a firm conviction that the program is worth while, not only from the standpoint of the management and the balance sheet, but also for the welfare of the employees themselves. . . .

Before I describe some of the things that we happen to be doing on the Western Pacific, I would like to give a few random reflections as to some of the attitudes that I have found among railroad employees, that I think are worthy of great study. I don't think it is an easy job to find how these attitudes are going to be corrected, but I know that if we are going to have the type of efficient operation that we should have, and the 100 per cent performance that we have a right to expect, we are going to have to find the answers.

#### A Long-Lived Tradition

I have found that many railroad employees have a very exaggerated idea about what may happen to them if they don't do their work correctly. I have always been amazed at the number of men who fear they will be fired. . . . Very few employees are fired; but consider that from the employees' standpoint a lot of them still think they may be fired tomorrow. It is based possibly on a disciplinary system which has fear and threats as its basis; it certainly did at one time, and I think the effect still persists, perhaps as a tradition. That is something that I am sure modern supervisors will agree does not belong on a railroad—or anywhere else—in dealing with employees. . . .

Another thing that strikes a good many people is the distance between front-line management and the rank-and-file workers, in many instances. It is far too great.



By FREDERIC B. WHITMAN
President

If there has ever been an address or other public expression from the top management level which so thoroughly covers the entire range of methods calculated to improve relations with and performance of railroad personnel as this talk by Mr. Whitman, we have not been privileged to see it. The discussion is not theoretical—Mr. Whitman doesn't preach anything that he isn't putting into actual practice on the Western Pacific. We miss our guess if there is a single reader of Railway Age who will not find a great deal that is new and, even more, that is helpful in what Mr. Whitman has to say.—Editor

There are a lot of different ways and means whereby that gap can be overcome.

There is another peculiarity about the rank-and-file workers that has always interested me. I have heard them speak very disparagingly of the management, as an impersonal thing. "The management ought to do this, the management ought to do that." Actually, many of those employees have great respect for their immediate supervisors. They consider them as authorities, and they go to them for advice and assistance. . . Yet they talk about what the management did and how bad it was, and so forth. It is an impersonal thing in their consciousness, and I think a lot can be done to change that. . . .

There is a tremendous opportunity to do much more towards interesting railroad employees in their jobs.... Most railroad men, when they get together, will talk till all hours about railroading. I believe there is an excellent opportunity to stimulate that interest for the development of real efficiency. I know there is, and I know that some things can be done about it.

Generally speaking, when the word "personnel" is applied to railroads and we talk about a personnel officer

or a personnel department, we are not talking about personnel; we are talking about labor relations.

Now, certainly labor relations have a very definite part in a personnel program, but only as one part of it. There are a great many other things that belong in a rounded personnel program, things that on many railroads have never been done. . . .

The Western Pacific is attempting to start on such a program, to develop a stable, productive and satisfied work force. There is a great deal that we haven't done, and it is going to take a long while really to get things accomplished, but I do know we have made a fair start towards the establishment of such a program. . . .

We have established a very small personnel department. It consists of three employees—a director of personnel, who has the title of assistant to the general manager, and two clerks. The director works in very close cooperation with the labor relations department, because their work is interrelated. But there is much more to be done by the personnel department in many ways than there is by the labor relations department.

This small personnel department has complete top management support, and all of the department heads are with the personnel director in encouraging the program. It is only a staff function, as it should be, because a personnel program that works isn't something that somebody else foists upon you; it is something that you adopt for your own, so that right down through the line every supervisor is determined to make it work. . . .

On a larger railroad, of course, it would be necessary to have a somewhat larger department; but even then, in my view, it should be kept small; because, again, it is a staff function; it is an advisory function; it is an educational function—but it is not an operating function.

We started on the Western Pacific on the premise that perhaps we weren't doing as good a job as we ought to do in the selection of new employees. With that in mind, we embarked upon a course of training which took about a week, which was attended by every person who had to do with the hiring of new employees. It was an attempt to train those people to use a type of interview which would give us a much better idea of what prospective employees had been doing in the past, because we felt that if we could find out that much about them—and it involves a good deal—then we would be able to predict what they might be able to do in the future.

Another phase of our personnel program has been the adoption of a position evaluation plan, applying to supervisory positions not covered by any labor agreement. [Mr. Whitman then outlined salient features of this program, which was described in detail in Railway Age, November 25, 1950, page 28.—Editor.]

#### "Performance Appraisal"

The plan has the following advantages: It has produced a salary structure which we feel is more closely in line with comparable positions in outside industry. It is believed that such a salary structure will serve as an inducement to attract able young men, including some college graduates, to our service. It also has the advantage of providing incentives in salary, because there is an opportunity for a man to raise his salary within the grade on the basis of merit increases. We are sure that this will give us increased efficiency on the part of the supervisors. It also will enable us to break away from the unsound policy of coordinating salary increases with increases granted to the rank and file as a result of collective bargaining.

After we had completed this position evaluation plan.

we recognized that if we were going to have merit increases within the grades it was going to be necessary to have some measure of whether the people in these various positions deserved such merit increases. We have now embarked upon a performance appraisal plan. We have formed a committee, which is in charge of our personnel assistant, but is staffed with such people as our auditor of revenues, an assistant superintendent, an agent, an assistant superintendent of dining cars, an assistant chief mechanical officer, an assistant freight traffic manager, and an office engineer, as well as a road foreman, to develop a satisfactory and validated means of appraising performance.

This committee has worked about nine months. The members have finally adopted a plan based upon the so-called first choice method. If the results of the present plan are satisfactory and can be validated—in other words, can be tested, so we are sure that this plan will produce a satisfactory means of evaluating performance—then it will be adopted. My guess is that we will probably have it in service within the next 60 days.

#### Across-the-Board Training

In addition to those things, we have also embarked on a series of *training programs*. In this respect, we are operating on the premise that the supervisory segment of our work force has five needs: knowledge of the work, knowledge of its responsibilities, skill in instructing, skill in leading, and skill in improving methods.

In our opinion, the first need involved the skill in improving methods, and for that purpose we consulted with the Training Within Industry Foundation. The job methods course was taken by all of the top officers of the company, including myself, down to all of our supervisors.

Briefly, job methods is designed to help a supervisor analyze a problem into factors, so that after he recognizes the various factors that bear on any problem, in many instances the solution of the problem becomes simple. In some instances it does not. In some instances it requires additional effort and work and thought to devise ways and means of overcoming some of the factors that are handicaps, but it does give every supervisor a logical, orderly method of analyzing problems that come before him. Most engineers have had training in analysis. Many men with legal backgrounds have had it. But there are lots of railroad supervisors who haven't had it—and in my experience they are wonderful in dealing with an emergency, but when it comes to taking a long-range view of a problem and trying to analyze all the factors, in many instances they don't do as well as they should. We know that this will help them.

We have developed our own training men for handling these classes. We have had 265 job methods proposals submitted since the first of the year. We have rejected 46, we have 86 pending, and 133 have been put into effect. The estimated annual savings on 22 of these proposals amount to \$63,000. The estimated cost in 15 of them amounted to \$14,000. . . . Proposals involving improved quality of workers' service amount to 74; involving improved shipper relations, 19; involving accident prevention, 16; involving job simplification, 77.

I know this training has given us a much more productive work force. As fast as our departments appear ready, we intend to continue with the T.W.I. courses. We will probably use next job instruction, and then job relations.

Another thing that we are doing on the Western Pacific is to "guinea pig" a 39-month training course designed to provide young men with a well-rounded

exposure in all phases of railroading. The 39-month program is broken down as follows: roadway engineering, 13 months; operating, 11 months; mechanical, 7 months; accounting, 4 months; traffic department, 4 months.

During the 13 months spent in the maintenance-of-way department, the student works as a laborer on a steel gang, a ballast gang, a tunnel gang, a bridge and building gang, and perhaps a signal or off-track equipment gang. Certainly the student does not become an expert during that period. That is not the intent. But he works hard, and he gains an appreciation of the problems and hardships that face roadway crews. If he lasts at least ten months, we are reasonably sure that our selection has been good, and that he will be able to handle the future program.

At the end of the 39-month period, the student is placed with a \$400-per-month salary level, in the department for which our interviews with the student and reports from various supervisors indicate he is best suited. . . .

So far, the emphasis here has been on training the supervisors, and little has been said about training for employees. But here, too, we have a program under way.

One of our large departments—accounting—has a general knowledge course, or job improvement training program, on every night of the week. The employees take this training on their own time. [Mr. Whitman then outlined the genesis and development of the accounting courses, which were the subject of an article in Railway Age, June 11, 1951, page 44.—Editor.]

As outstanding success has been obtained in the accounting department, we feel that the same success can be obtained in many of our other departments: the operating department, both in road and yard work; the mechanical department, in car and locomotive work; and the track department, in better track methods. We are proceeding slowly to develop that information. We will of course have difficulty in getting the right number of people in classes where people are scattered on the road, but I know from my own experience as a trainmaster and superintendent that we will develop enough interest in those subjects to be able to get our conductors, our firemen, our brakemen, our switchmen and our clerks out on the divisions. I know that. It is a matter of developing the right type of skill among our supervisors and giving the employees the right material to study.

#### **Many Opportunities**

We have, of course, a lot more things to be done in the way of employee training. If we are going to do that better job in all departments which is our objective, we should have instruction in better switching methods, better diesel maintenance, better track maintenance, better salesmanship in our traffic department, and public relations for all.

The course that the New York Central had in public relations several years ago was a splendid one; every railroad should have a course like that. It should not be just one course; it should be followed up from year to year, because those things get old. New things come up. If we are going to do the right kind of job and the efficient job which we ought to do, really to run our railroads economically, in my opinion it is the only way to get the job done.

Take the field of economic education. Two years ago I made a trip on the Western Pacific to meet all of our employees. I took our department heads and the general chairmen of the labor organizations. We covered the railroad from one end to the other with a series of dinner



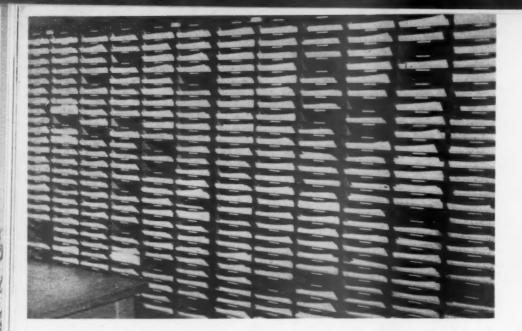
meetings. We started at Salt Lake and finished up at San Francisco. We had 14 breakfast, luncheon, or dinner meetings. I talked for approximately 50 minutes; the general chairman talked for about 10 minutes; the general manager talked for about 10 minutes on safety. [This undertaking was described in detail in Railway Age, September 2, 1950, page 50.—Editor.]

All of my 50 minutes were largely concerned with why it was necessary for the Western Pacific to operate so that it could make a profit, and what we were going to do to see that it did make a profit. It gave me an opportunity to explain that we intended to run long trains only as often as we had business offered to move. It gave me an opportunity to explain that we weren't going to make a lot of street-car runs in terminals with single cars, that we were going to have our terminal operations on an orderly basis. I know, from the expressions of the employees to me and through the grapevine, that that program paid off.

I feel that on all of our railroads we have a tremendous job to do in the matter of economic education, but I don't think we could even start on that job until we have a number of other programs of education.... A lot of other industries are doing it, but that is because they have had programs of employee education for many years, and their employees are accustomed to recognize that management is going to furnish them with sound, convincing facts and information.

I am well aware that the Western Pacific is not alone in trying to adopt a personnel program. But we know that on our railroad it is beginning to pay off. I know that as far as our supervisory team is concerned it has paid off. Our supervisory team is very much on the ball, and they are determined that our railroad is going to move forward and is going to try and furnish our good freight service as economically as we can possibly do so.

I hope that all railroads, particularly aided by top management, will begin to take a sincere interest in the establishment of what I call a real personnel program. If we do, I am confident that we won't need to worry too much about increases in freight rates, and we will be able to operate our railroads so that we will have a credit standing that will give us the capital we need to provide additional improvements to establish topnotch freight and passenger service.



In the C. & O.'s mail room at its Richmond, Va., office both sides of this case are filled with tariffs to be mailed out to the railroad's agents. In addition, the tariffs are mailed to shippers and others interested

Program began in 1949—One aim is to reduce number of tariffs from about 600 to 60
—Tremendous page savings have been realized

# How the Chesapeake & Ohio Is Simplifying Its Tariffs

A tariff simplification program was instituted in 1949 by the Chesapeake & Ohio, before the Interstate Commerce Commission ordered the railroads to reissue—by September 30, 1952—all tariffs to include the Ex Parte 162 and 166 increases. This program has led not only to easier-to-read tariffs but also to a substantial reduction both in the number of tariffs published and the total number of pages of printed tariff matter issued by the railroad, though a saving in printing costs was not the primary objective of the C. & O.'s tariff revision. As of January 1, 1949, approximately 600 tariffs were published on the two districts of the C. & O. It is the hope of the railroad's traffic department that by October 1952 the number will have been reduced to not more than 60, a reduction of 90 per cent.

#### Substantial Progress

Already some 218 tariffs have been replaced by 20. These new tariffs contain 1,558 pages, instead of the 2,786 pages included in the predecessor publications. The simplification secured to date has been accomplished mainly by combining tariffs, including those applying in Trunk Line and Central Freight Association territories, by a little more economy in the use of words, and by changes of format. Asked how the road's management knows the program was a success, one C. & O. man said, "Well, we haven't heard any yells of anguish from anyone yet, and we have had a few compliments. And, speaking for myself, since I'm a former rate quotation man, I know they're easier to use."

The C. & O.'s present cement tariff, No. 258-G (I.C.C. No. 13024), which is one of those which has received some shipper commendation, is an example of combining for simplification. Before the combining operation

which led to 258-G, there were in all 17 tariffs, consisting of about 255 pages (including supplements), containing rates on cement. Now there is one "book" of 100 pages.

The old cement tariffs contained, in addition to matter common to all tariffs (i.e. rules, list of participating carriers, etc.), an alphabetical list of stations to which rates applied, while adjoining columns showed the delivering line and the station index number as given in Agent Leland's "List of Open and Prepay Stations." There was also a geographical list of stations, with rates and routes, and, again, the index number of the station in adjoining columns.

In using the so-called geographical list of stations, of course, one first had to find the delivering carrier, then look for the station index number, opposite which the rate and route were printed. No. 258-G, on the other hand, lists destination stations only once (alphabetically and without index numbers), while the initials of the delivering carrier, the rate and route numbers are immediately alongside the station name. Thus the rate clerk, after finding the station from which the rate applies, can determine at one glance whether or not the rates are applicable to the shipment's destination; which is the delivering carrier; the rate and the route number. He then has to refer only to the routing section to determine the carriers participating in the haul. Thus one complete operation is omitted, that of the check to see whether the tariff applies, for that is done simultaneously with other operations.

Incidentally, the C. & O. at present is including the Ex Parte 162, 166 and 168 increases in all the tariffs it is reissuing.

The present C. & O. switching tariff No. 653-P (I.C.C. No. 13114) is another one that has resulted from many

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—Superimposed on a portion of a om the C. & O.'s new switching part of a page from the former eake District switching tariff

changes. Prior to August 1950, the Chesapeake District and Pere Marquette District each issued separate (sometimes several) tariffs for the following services: switching; absorption of switching and trackage charges; trap or ferry car charges; and transfer and/or drayage charges. All this information now is included in one tariff, No. 653-P. The Chesapeake District's switching tariff alone took up 63 pages under the old scheme. Altogether some 30 tariffs were combined to make this new tariff, with savings of about 380 pages. These were some of the results accomplished by the following changes:

1. Separation of rate information from such other information as lists of industries having private or assigned sidings within the defined switching limits at each station; switching limits; and placing in a few "Notes" information which was repeated frequently in the "Between" and "And" columns and elsewhere;

2. Most of the charges are combined in one place so that at one glance, for example, the rate clerk can tell what, if any, switching charge may apply, providing reciprocal switching is involved, information that form-

erly was in a minimum of two different tariffs;
3. In the section on switching limits, etc., separate

#### WHAT SIMPLIFICATION CAN ACCOMPLISH—ALL TARIFFS LISTED BELOW WERE CANCELLED IN FULL WHEN THE C. & O. COMBINED MISCELLANEOUS COMMODITY TARIFFS INTO ONE, NO. 2866-A (M.P.S.C. NO. 196)

CANCELLATIONS											
M.P.S.C. (P.M.D.) No. 4557 4561 4570 4576 4581 4592 4754 4758	Tariff (P.M.D.) No. 7208-D 7065-K 7052-I 6830-N 7267-B 7125-G 6951-A 7257-A	M.P.S.C. (P.M.D.) No. 4800 4801 4804 4816 4822 4823 4849 4885	Tariff (P.M.D.) No. 6894-P 6233-G 5903-S 6417-A 7138-A 7222-A 6107-Q 7369-B	M.P.S.C. (P.M.D.) No. 5249 5332 5433 5485 5487 5499 5507	Tariff (P.M.D.) No. 7488-A 7339-A 7569 7577-A 7578-A 7378-I 7473-F	M.P.S.C. (P.M.D.) No. 5601 5602 5603 5604 *9 *18 *43 *44	Tariff (P.M.D.) No. .7534-D 7153-R 7511-F 7119-R 7460-A 7619-A 7619-A	M.P.S.C. (P.M.D.) No. *128 *129 *130 *134 *135 *136 *148 *150	Tariff (P.M.D.) No. 7002-Z 7512-I 6911-F 7650-A 7655-A 7656-A 7381-T 5624-H	M.P.S.C. (P.M.D.) No. *166 *167 *168 *169 *170 *171 *174 *177	Tariff (P.M.D.) No. 6714-D 6644-J 7236-T 7647-B 7673 7674 7677 6500-D
4759 4760	7232-A 7238-A	5018 5042	7749 7454	5559 5560	7366-N 7411-K	*49 *95	7306-N 7638-A	*151	7646-A 7446-K	*187 *191	7683 7685
4763 4764	7152-A 6609-A	5084 5247	7464 7514	5599 5600	6870-E 7090-V	*97	7645 7336-L	*164	6822-A 7644-A	*192	6880-C

\* C. & O. Railway series number.



Rate quotation room in the C. & O. station at Detroit

"items," i.e., the station names, are placed in the left margin of the page instead of the big page-centered arrangement; most "items" now take very little space;

4. In most cases the "Between" and "And" columns

are omitted, thus saving a lot more space;
5. Elimination of the alphabetical list of stations "at, from or to which rates named in this tariff apply"; and
6. About 29 title pages and the same number of sets

of rules are eliminated.

Stone formerly was the subject of 7 tariffs which now have been combined into one, C. & O. 2143-H (I.C.C. No. 13187). Again the new tariff is a departure from the old, and is a combination of Pere Marquette and Chesapeake District tariffs, each of which differed considerably from those published by the other district. In one old Chesapeake District tariff, each "section"

Vermilion			
Vinton	} C&O(CD)	{ 171 201	A 1 1
Waco	NYC&StL_	146	7 1 1 1 1

PENNSYLVANIA				
Allegheny		B&O	308	A
Arden Beaver Falls		PRR PRR	308 294	A
Belle Vernon(Fayette Co.)	(Rule	P&LE P&LE	294 308	A
Belle Vernon	18) 17,28 (Rule	PRR	308	A

Fig. 2-New tariff giving rates on stone

provided the rates for a certain "class" of stone, from one or more points to many destinations in 11 states and Canada. The rate clerk using this tariff found out from the "Table of Contents" that the rates for certain classes of stone to destinations in certain states were listed on pages 37 to 69, for example. The next step would be to go to the index of commodities and find that the rates on the commodity being shipped were in a subsection, in pages 55 to 61. Turning to those pages, he went down the alphabetical list of stations until he found the proper destination station. There he found information on the rate, route number and the delivering carrier. A turn to the routing section gave him the rest of the information he needed. The procedure was somewhat different with P.M. tariffs. With the new tariff, the rate clerk merely looks for the originating station and destination station. There he finds out, at a glance, whether or not the rates apply on the commodity being shipped, and all other information except the carriers participating in the route. For this, of course, he turns to the routing section.

#### Some Advantages

In pursuing its objective of tariff simplification, the C. & O. found commodity tariffs that could be canceled completely, simply because traffic no longer was moving. Also, a number of errors were found in tariffs and corrected, such as wrong rates or routes, firms listed improperly as inside switching districts, etc.

Among other things which the C. & O. has done in at least some of the tariffs revised to date are:

1. All numbers for supplements to interstate tariffs will be given also the state commission numbers, whether or not the supplement applies in all states. This procedure is expected to avoid considerable confusion;

2. Routes are numbered from one to infinity for each destination carrier;

Rules common to all tariffs are numbered uniformly in all tariffs;

4. Where different wordings had been employed to explain the same service or charge, these are being standardized and simplified;

5. Instead of the gray paper formerly used for tariffs

they are printed on white paper, which makes the type stand out better.

C. & O. officers are quite aware that they have not achieved the ultimate in tariff publication. Consolidation and simplification are still to come, for example, in transit tariffs, among other things. They do think they

have made progress, but for example, they believe that some of their simplified tariffs can be further simplified. In fact, they view the project as a never-ending one, in which they are going to need a lot of help from shippers, particularly, for example, in simplifying and consolidating commodity descriptions.

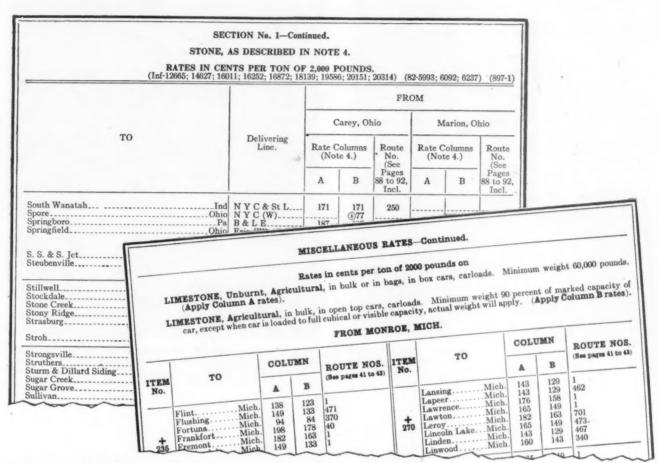
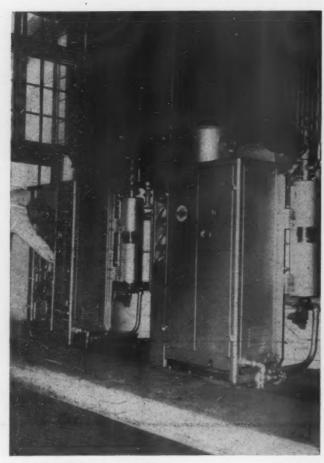


Fig. 3—Pages from the Chesapeake District (upper) and Pere Marquette District stone tariffs. They differ considerably, one from the other, and from the new tariff shown in Fig. 2

Index No.	TO (Note 1.)	Rates	Page'	Index No.	TO (Note 1.)	Rates Car- loads.		Index No.		TO lote 1.)	Rates Car- loads.	Page				
160	THE BALTIMORE AND ANNAPOLIS RAILROAD COMPANY. AnnapolisMd	①17	8	1610 1620	THE BALTIMORE AND OHIO RAIL- ROAD COMPANY. Sleepy Creek W Va to Berkeley	16	3-4	2635 2665	AND O ROAD Volga I	ALTIMORE HIO RAIL- COMPANY. MineW Va	18	18				
615	THE BALTIMORE AND OHIO RAIL-ROAD COMPANY.  Bay ViewMd to	TO		FI	ROM Delivering Line	Bay Mi	Cîty,	. A	Boulder	Fordwick Va.	17	18 Lamson,	Pe	ort Huron,		Toledo,
900	Fort George G. MeadeMc	Mid	OHIO- dletown		er B&O	-	outes	Rates	Routes	Route	Rates	Routes	Rates	Routes	l es	O. Route
980		Midda Midla Milfo	iletown and Cit rd Cent	Jct y re	NYC(C) 24 PRR 24 PRR 24 NYC(C) 23	58,6		22   15 22   21	3,60 22 60,63		28 28 28	22 58,60 15		A	-20 4	

Fig. 4-Pages from old (upper) and new cement tariffs



Two Vapor-Clarkson Model 4740 steam generators installed in the powerhouse at the Norfolk Southern Carolina Junction shops at Norfolk, Va. Automatic controls are modulated to develop 1,200 to 4,800 lb. of steam per hour



From the steam header, supplied by the steam generators, the vertical mains distribute the steam to the shop's steam hammers, steam blowers, building heat, tank heaters, etc. The locomotive boiler washout pump is shown at the right

Records of the cost of steam generated by two Vapor-Clarkson train-heating steam generators installed at the Carolina Junction back shops of the Norfolk Southern at Norfolk, Va., show a saving in the cost of steam for shop operations and building heating sufficient to pay for the cost of the installation within the first year. The Vapor-Clarkson generators replaced two fire-tube boilers.

The Norfolk Southern made its first stationary installation of this type of steam generator at its Glenwood shops at Raleigh, N. C. These were two Vapor Heating Corporation Model 4625 units, and they worked out so well that two of the larger Model 4740 units were installed at the Carolina Junction shops. These replaced the two conventional steam boilers.

Records were kept of steam costs, including labor, fuel, maintenance, feedwater treatment, and insurance. The figures show savings of over \$1,000 a month. Several men were transferred from boiler attendance to other shop work. Now one man takes about 30 min. per working day to start, check and blow down the two Vapor-Clarkson steam generators. There are no standby or week-end labor costs because the units are turned off when there is no demand for steam.

Once started, automatic controls take over, causing the steam generators to maintain an ample supply of steam at 150 p.s.i. on the line. One Model 4740 Vapor-Clarkson steam generator has a capacity of almost 5,000 lb. of steam an hour. It supplies shop steam under normal

## **Diesel Steam**

shop operations in the summer. In the winter, or when the shop steam load is heavy, both units operate.

There are two steam hammers in the shop. These need dry steam at 150-175 p.s.i. for proper operation. The larger is a 3,300-lb. hammer and has a cylinder 14 in. in diameter by 33 in. stroke. The smaller is a 700-lb. hammer for light work. Often both are used at the same time. The blacksmith says the dry steam makes the hammers operate as hammers should.

Steam locomotive blowers are supplied through a 34-in. steam line. This is wide open for about 45 min. when firing up a locomotive.

There are two alkaline cleaning tanks, each 15 ft. long, 4 ft. wide and 6 ft. deep. These are heated through open steam pipes.

Sellers injector cleaning guns furnish hot water under pressure for cleaning pistons, air-brake parts, etc. A duplex steam pump provides hot water under 300 p.s.i. for locomotive boiler washing.

There are three 200-gal. tanks for filter cleaning. These contain cleaning solution, rinse water, hot oil, and drying



The 3,300-lb. steam hammer. The 700-lb. hammer is in the background. A 6-in. steam pipe from the generators is an effective steam chest for the hammers, supplying ample quantities of dry steam



Firing up an engine at the Glenwood shops of the Norfolk Southern where steam is furnished by two Model 4625 steam generators. The blower uses the full flow of a 3/4-in, pipe at about 100 p.s.i.

# **Generators Become Shop Power Plant**

Savings over operation of replaced fire-tube boilers pay installation cost on Norfolk Southern in a year

spaces, and are heated with steam coils. The shop whistle also has a steam connection.

Steam for heating the buildings is used at 40 p.s.i. The storehouse is 150 ft. by 40 ft. and the two-story office building, 75 ft. by 40 ft. There are also an electric shop, a paint shop, an oil house, washrooms, and foreman's offices. Steam is also available to passenger cars on sidings.

During a recent month 20 gal. of fuel were used per hour during the eight-hour working day. This was much less than the equivalent fuel burned by the previous boilers because the Vapor-Clarkson steam generators use fuel only when steam is needed by the shop. The units turn off and pick up steam pressure in seconds as steam is used.

The full operating steam pressure is developed two minutes after the steam generators are turned on. It is unnecessary to have anyone on hand ahead of the other workmen to get up steam.

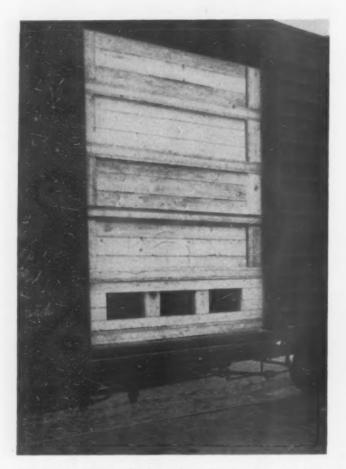
The Vapor-Clarkson steam generators are about onefifth the size of the boilers previously used. They are complete packages, including all controls, and were brought in, put on a cement base, hooked up to fuel, water and electric current, and were ready to go.

Less treating material is used because much less water is used. It is said only one-third as much water is required as previously.

Insurance costs on the Vapor-Clarkson steam generators are lower. There is no explosion hazard, as there is a very small volume of water being heated under pressure. The many safety features protect the machine in case some control is not working properly.

These are said to be the first Vapor-Clarkson steam generators used in shop installations.

# Grain Door Eases Unloading



C.N.R. "low loss" grain door. Paper board panels close the openings in the bottom frame

A type of door for railway grain cars which will speed unloading, prevent loss of grain during transit and effect considerable economies has been developed by the Canadian National.

The new "low loss" grain doors, expected to go into general use in the near future, have successfully passed exhaustive tests and will become standard equipment for C.N.R. grain cars. An initial order sufficient to equip 2,000 cars has been placed by the railway's purchases and stores department.

The door consists of four wooden fillers and a frame section, each 15 in. high and 7 ft. long. These are separated by five ribs. The number of sections used, however, may vary with the height of the car or the size of the grain load. The chief difference from the standard type door is the frame section, located at the bottom of the door, which has three paperboard panels.

#### **Bulging Eliminated**

The standard door consisted of three wooden sections, each about 30 in. high. When cars were unloaded manually, it often was necessary to smash the door with axes to relieve grain pressure. The "low loss" door remedies this. To unload the car, workers have only to puncture the paperboard. Grain flow is easily controlled by the size of the puncture, a feature that enables grain to be bagged direct from the car, if desired. It is only necessary to insert new paperboard in the lower frame and the door is ready for use again.

Loss of grain during shipment through bulging of the door under grain pressure is practically eliminated with the new door. Tests have shown a maximum deflection of only 3/8 in., as compared with the older type door with its deflection of as much as 4 in., the maximum allowed by the car's outer door.

allowed by the car's outer door.

Other features of the "low loss" grain door include greater strength, longer life, easier handling due to the smaller sections and easier and faster coopering of the

The increased life span of the new door is also expected to effect economies by reducing the number of new doors required each year. In 1950, the C.N.R. purchased approximately 145,000 of its type E doors for use on its lines.

#### PURDUE STUDY CALLS FOR CLARIFICATION OF TRANSPORTATION POLICY

Clarification of the national transportation policy in terms of regulation, promotion and finance looms as an imperative need if the transportation system is to serve the nation most advantageously in times of peace and in a national emergency, according to a recent study of all forms and factors of transportation made at Purdue University.

In this 18-month study made by A. K. Branham of the Engineering Experiment Station staff under supervision of Dr. A. A. Potter, dean of engineering, direct contact was made with more than 100 units in the transportation field.

Among the major questions involved in such policy clarification are coordination of private transport facilities versus government intervention, subsidies versus user charges, adequate transportation for national defense, consolidation of all federal regulatory bodies, protection of the public against excessive rates and charges and discriminatory treatment, interstate barriers, safety, and means for further growth and development of railway, highway, pipeline, air, water and marine transport.

This study was used by Mr. Branham as material for a

treatise on "Transportation Factors and National Transportation Policy: a Partial Analysis." As pertinent findings in his study, he lists the following:

1. "The transportation system is adequate for the national economic, social, and political developments and nearly adequate for national defense, although improvements in quality and quantity of service should be made.

2. "Certain forms of transportation appear to be subsidized. If transportation is to remain as a private enterprise, it becomes desirable to allocate traffic among the commercial carriers in such manner that the rates will show the true economic cost of performing the service.

3. "There is a feeling among authorities that the conflict of national transportation policies cannot be solved with current divisions of authority and responsibility. There is definite need for an overall non-partisan agency responsible to Congress for developing and maintaining a unified policy.

policy.
4. "The transportation facilities of the United States are so great that, in the public interest of a democratic society, they must be retained as a private enterprise."

#### **GENERAL NEWS**

#### Car Surpluses and Shortages

Average daily freight car surpluses and shortages for the week ended October 27 were announced by the Association of American Railroads on November 1 as follows:

	Surplus	Shortage
Plain Box	38	6,152
Auto Box	28	70
Total Box	66	6,222
Gondola	0	3,717
Hopper	0	5,380
Covered Hopper	0	56
Stock	79	753
Flat	6	917
Refrigerator	1,972	0
Other	237	85
	2,360	17,130

#### **Arbitration Proposed** In Union Shop Cases

The National Mediation Board proposed last week that the railroads and unions representing non-operating employees agree to arbitrate the unionshop demands of those unions. The proposal was expected to be rejected.

It was made by the board after its unsuccessful effort to get the parties into "concurrent mediation." The board abandoned that effort on October 25, after conducting a series of meetings which pointed up the general opposition of railroad management to consolidation of the union-shop cases for national or regional handling. The management representatives have taken the position that the issue should be settled on an individual-road basis.

#### Pension Liberalizer Signed by President

President Truman has approved legislation embodying amendments to the Railroad Retirement Act which was enacted by Congress shortly before its recent adjournment. The amendments will raise pension and annuity benefits 15 per cent, survivor benefits 33½ per cent, and lump-sum benefits 25 per cent. (Railway Age of October 29, page 14.)

#### Canada May Control Interprovincial Trucking

The Supreme Court of Canada, in a unanimous ruling, has established the constitutional power of Parliament to control interprovincial and international highway traffic.

The ruling, first of its kind in Canadian judicial history, struck a blow at what many provinces believed to be their constitutional rights and brought immediate expressions of concern from the trucking industry over the possibility of new federal government regulations. However, government officials said there were no immediate plans for making such regulations.

The judgment upset a New Brunswick Supreme Court decision, denying the right of a U.S. bus company to pick up and set down passengers in that province on its through route from Boston, Mass., to Halifax, N. S., and Glace Bay. In effect, the ruling

1. The province cannot bar its highways to buses, trucks or other commercial traffic using these roads as a "through" route from one province to another.

2. It cannot ban traffic using its roads

when such traffic originates or terminates in another province.

 It cannot prohibit use of its roads to traffic originating or terminating in the United States.

4. In all such interprovincial and international traffic, it cannot prohibit, for example, a bus company from dropping off or picking up passengers—provided they had stopover privileges—along its regular route.

Toute.

5. Provinces could regulate only purely "local" traffic, which originates and terminates within the provincial boundaries.

In Toronto, the Canadian Automo-

In Toronto, the Canadian Automotive Transportation Association termed the ruling "a disappointment to the trucking industry. Our concern," it said, "is that the federal government at this or a later session of Parliament may attempt to assert its jurisdiction by taking control of international and interprovincial trucking — a sphere of regulation which has been exclusively provincial since the birth of the trucking industry three decades ago."



AS REPORTED in Railway Age September 24, page 60, the dining car department of the Pennsylvania is experimenting with a bank of automatic coinoperated food and drink machines in one of the coaches on one of the road's New York-Washington trains. The equipment was manufactured by the Rowe Corporation of New York and is serviced at station stops by the Automatic Food Service Company, a Rowe subsidiary. Three machines, one dispensing sandwiches, another coffee, and the third milk, chocolate milk and orange drink, have been placed on one side of the aisle at the end of a mod-

ernized coach, with machines dispensing cake, doughnuts, candy and ice cream on the other side of the aisle. Seating space for 10 passengers was removed to permit installation of the equipment. Signs have been placed at the end of each coach in the train directing patrons to the specially equipped car, and a pamphlet describing the machines and telling passengers what they can buy from them, is placed on each seat before the start of the trip. If the trial proves successful, the new service may be expanded, with possibly several sets of equipment on each train. The service is in addition to dining car service

#### EOUIPMENT AND SUPPLIES

#### **Domestic Equipment Orders** Reported in October

Domestic orders for 15 steam locomotive units, 409 diesel-electric loco-motive units and 8,145 freight-train cars were reported in Railway Age in October. No passenger-train car orders were reported. Estimated cost of the locomotives is \$59,485,000, and of the freight-train cars, \$47,380,000. The accompanying table lists the orders in detail.

During the first ten months of 1951 Railway Age has reported domestic orders for 21 steam locomotives and 2,212 diesel-electric locomotive costing an estimated \$347,012,777; 74,095 freight-train cars costing an estimated \$427,843,000; and 122 passenger-train cars costing an estimated \$17,485,000

#### FREIGHT CARS

The Missouri-Kansas-Texas has ordered 500 70-ton hopper cars from the Pressed Steel Car Company.

#### LOCOMOTIVES

The Florida East Coast has ordered five 1,500-hp. diesel-electric freight locomotive units from the Electro-Motive Division of General Motors Corporation at an approximate cost of \$888,140. Delivery is scheduled for December 1951.

The Spokane, Portland & Seattle has ordered eight 1,600-hp. diesel-electric road-switching locomotive units from the American Locomotive-General Electric Companies at an estimated cost of \$1,185,160. Delivery is scheduled for January 1952.

#### SIGNALING

The Elgin, Joliet & Eastern has ordered equipment from the General Railway Signal Company for installation of a car retarder system with automatic switching at Kirk yard, Gary, Ind. The yard will have 58 classifica-tion tracks, 19 Type E retarders to-taling 940 track feet; an automatic switching control panel with 58 trackselection push buttons; and a diagrammatic type retarder control panel with controls for 11 retarder loca-

The Southern has ordered equipment from the General Railway Signal Company for installation of a remotely controlled relay interlocking at Asheville, N. C., and Biltmore. The control machine, to be located at Biltmore, will have 11 track lights and seven levers for control of five switch machines and 10 signals. Included in Locomotives

			Issue	
Purchaser	No.	Type	Reported	Builder
A.T.&S.F	10	1,600-hp.	Oct. 15	Fairbanks, Morse
	14	1,200-hp. Switching	Oct. 15	Fairbanks, Morse
Erie	3	1,500-hp, Gen. Purpose	Oct. 8	Electro-Motive
	2	1,200-hp. Switching	Oct. 8	Electro-Motive
	4	1,600-hp. Gen. Purpose	Oct. 8	American-G.E.
	4	1,600-hp, Gen, Purpose	Oct. 8	Baldwin-Lima-Hamilton
Me. C	1	1,000-hp. Switching	Oct. 1	American-G.E.
N.Y.C.	32	1,500-hp. "A" Frt.	Oct. 1	Electro-Motive
1111101	32	1,500-hp. "B" Frt.	Oct. 1	Electro-Motive
	40	1,200-hp. Switching	Oct. 1	Electro-Motive
	20	800-hp. Switching	Oct. 1	Electro-Motive
	35	1,600-hp. RdSw.	Oct. 1	American-G.E.
	43	1,000-hp. Switching	Oct. 1	American-G.E.
	18	1,200-hp. Switching	Oct. 1	Baldwin-Lima-Hamilton
	17	1,200-hp. Switching	Oct. 1	Fairbanks, Morse
	12*	1,500-hp. RdSw.	Oct. 1	Electro-Motive
	10*	1,200-hp. Switching	Oct. 1	Electro-Motive
	2*	2.250-hp. "A" Pass.	Oct. 1	American-G.E.
N.&W	15	0-8-0 Switching	Oct. 29	R.R. Shops
S.AL.	10		Oct. 22	Baldwin-Lima-Hamilton
3.AL,	10	Diesel switching	OC1. 22	(American-G.E.
Southern	100	Various diesel	Oct. 29	Baldwin-Lima-Hamilton
Southern	100	various diesei	Oct. 29	Electro-Motive
				Electro-Woulse
the she Distahund & Labe I	0			
*For the Pittsburgh & Lake I	crie.			
		Freight Cars		
A.C.L	2	50-ton Unicel box	Oct. 8	Pressed Steel Car
F-10-1000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-	DO-INII WIIIINII DOV		

*For the Pittsburgh & Lake Er	ie. Freight Cars
	rieight curs
A.C.L	2 50-ton Unicel box
	500 70-ton Ore
C.B.&Q	500 50-ton Box
	750 70-ton Hopper
C.R.I.&P 2	70-ton Cov. Hopper
	50 70-ton Hopper
	50 50-ton Box
	50 70-ton Hopper
G.N 9	50 50-ton Box
	50 50-ton Exp. Refrig.
	50 50-ton Exp. Refrig. 3 95-ton Flat
	15 Caboose
N.Y.C	6 125-ton Figt
***************************************	6 125-ton Flat 4 170-ton Flat
N.Y.S.&W	35 50-ton Box
	80* Munitions
	100 50-ton Tank
	00 50-ton Hopper

ville Steel Car Oct. 29 Oct. 29 Oct. 22 Oct. 8 Oct. 15 Oct. 15 Oct. 15 Oct. 22 Oct. 25 Oct. 15 Oct. 15 Oct. 15 Oct. 15 Oct. 15 Oct. 15 Oct. 22 Oct. 25 Oct. 15 Oct. 15 Oct. 15 Oct. 15 Oct. 15 Oct. 15 Oct. 22 Oct. 25 Shops Shops Shops ic Car & Fdy.

\*For the Navy.

the order are type K relays, model 5D switch machines and Type ME colorlight dwarf signals.

The Richmond, Fredericksburg & Potomac. has ordered from the Union Switch & Signal Division of Westinghouse Air Brake Company 14 sets of four-indication type E coded continuous cab signal equipment for installation on steam locomotives now equipped with three-indication non-coded cab signal and speed control equipment.

#### IRON & STEEL

The Baltimore & Ohio has ordered 100,000 tons of rail for delivery in 1952. Orders were placed with the Bethlehem Steel Company, the Carnegie-Illinois Steel Company and the Inland Steel Company.

#### SUPPLY TRADE

The Chicago Steel Service Company has opened new general offices and warehouse at Kildare avenue and 45th street, Chicago. The one-story steel frame structure covers 120,000 sq. ft. and cost \$1,500,000 to build.

B. C. Tracey, manager of accessories and renewal parts sales of the

welding department of General Electric Company, has retired. Mr. Tracey joined General Electric in 1918 and was appointed to his present post in 1948.

William Irrgang, formerly director of plant engineering of the Lincoln Electric Company, has been elected executive vice president.

Jack Bard, economist and sales promotion specialist for the Interna-



J. R. Coffing, who has been elected vice-president in charge of sales, advertising and general office administration, of the Coffing Hoist Company, Danville, III. Mr. Coffing formerly was general sales manager



FIRE fighting equipment must be in readiness for emergency service at all times.

Likewise steam locomotives should be maintained to meet emergency service ... they will certainly be called on Anticipate such demands by providing the necessary replacement stock of vital parts that will be needed to recondition and to maintain them.

Check your reserve stock of parts for SUPERHEATERS, FEEDWATER HEATERS,

DRIERS, THROTTLES AND HEADER CASTINGS.

With material shortages and increased demands on our facilities, delivery schedules are lengthening. Act now... it is later than you think.



Superheaters · Pyrometers · Injectors · Steam Driers · Feedwater Heaters · Steam Generators · Oil Separators · Welded Boiler Shells · Throttles



N. H. Arnold, who has been appointed sales manager of the Standard Railway Equipment Manufacturing Company. He will be in charge of development, manufacture and sale of Standard's wheeltruing machine

tional Furniture Company, has been appointed assistant to the president, with headquarters in Chicago.

Clarence W. Osner has joined the sales department of the Railway Truck Corporation, with headquarters at Chicago.

John A. Rozos has been appointed director of exports of the Dodge Manufacturing Corporation, Mishawaka, Ind.

The Air-Maze Corporation, Cleveland, Ohio has purchased the Detroit Air Filter Company, Woodstock, Ill.

The Gustin-Bacon Manufacturing Company has opened a new sales office and warehouse facility in Houston. Tex., at 5531 Armour Drive. The new warehouse will house Hous-



T. H. Way, who has been appointed assistant vice-president of the Pullman-Standard Car Manufacturing Company. He will have charge of manufacturing at the Hammond, Ind., and Rockford, III. plants

ton division operations of the company's oil field, industrial, insulation and fire fighting equipment business. Paul O. Craig has been appointed manager of the Houston division, and H. M. Stone will continue as branch manager there.

The Pennsalt International Corporation has appointed Richard C. Skahan as assistant foreign traffic manager and Harry Aue as export sales correspondent.

A. Van Hassel, a vice-president and director of the National Steel Car Corporation, Hamilton, Ont., since 1942, has been elected president to succeed the late Robert S. Hart. O. H. Anderson, chief me-



A. Van Hassel

chanical engineer since 1925 and a vice-president since 1942, has been elected a director and also has been appointed managing director. Mr. Van Hassel also is president of the Magor Car Corporation of New York.

The Chipman Chemical Company has established new railroad division headquarters at 1116 Transportation building, 608 South Dearborn street, Chicago 5. A. J. Reading is manager of the division.

The Copperweld Steel Company, Glassport, Pa., has appointed T. Y. Henry as division manager of its new subsidiary, the Flexo Wire Company, with headquarters at Oswego, N. Y. Mr. Henry was formerly manager of materials section division standardizing, of the RCA Victor division of Radio Corporation of America.

The Dearborn Chemical Company, Ltd., has appointed Dr. William A. James as director of research, and Jerry Shaw as sales representative. Dr. James will assume charge of all research activities at the Dearborn laboratories, 2454 Dundas street, west, Toronto, Ont. For the time being Mr. Shaw will also have headquarters at Toronto. In the October 22 issue it was inadvertently

stated that Dr. James and Mr. Shaw were associated in their new positions with the parent company in the United States.

R. A. D'Amour and G. W. Plondke, formerly sales engineers for the Cummins Engine Company, Columbus, Ind., have been appointed assistant regional managers, Washington, D. C. region and Central region, respectively.



R. A. D'Amour

Mr. D'Amour was graduated from Michigan College of Mining and Technology, Houghton, Mich., with a degree in mechanical engineering in June 1948 and in August of that year joined Cummins as a trainee engineer. He was appointed a sales engineer in May, 1949.



G. W. Plondke

Mr. Plondke was graduated from George Washington University, Washington, D. C. in June 1948, with a degree in mechanical engineering. He joined Cummins at that time and following a trainee period was appointed sales engineer in February 1949.

Stockholders of Fairbanks, Morse & Co. will be asked, at a special meeting in Chicago on December 12, to vote on a proposal to split the firm's common stock on a two-for-one basis.



SERVICE...WITH A SOUTHERN ACCENT! A 25,000-mile privately-owned telephone communications network is an integral part of the Southern Railway System. It is one of the many reasons why shippers and receivers of freight moving to, from and within the South know that service "with a Southern accent" is good service. SOUTHERN RAILWAY SYSTEM

#### OBITUARY

Charles E. Coyle, general traffic manager of the Otis Elevator Com-pany, died on October 23, in the Presbyterian Hospital, Newark, N. J. He was 51 years old.

William T. Bissell, of the Journal Box Servicing Corporation, died on October 8.

#### FINANCIAL

Long Island.—Sale of Rockaway Branch; New Agreements with Pennsylvania.-Judge Harold M. Kennedy, in United States District Court at Brooklyn, has approved the sale to New York City of the Long Island's Rockaway branch, for \$8.5 million. The sale—which must still be approved by the I.C.C. and the New York State Public Service Commission -would involve 15.47 miles of line and 35.96 miles of track, serving 19 stations between White Pot Junction, on the Long Island's main line near Rego Park, and Rockaway Park and Far Rockaway, on the Rockaway peninsula on the south shore of Long Island. That portion of the branch across Jamaica bay has not been operated since 1,800 feet of double-track trestle across the bay were destroyed by fire on May 8, 1950, as a result of which abandonment proceedings were instituted.

Proceeds of the sale will be used by the railroad to finance, without borrowing, its \$6 million safety program, to provide new rolling stock and other service improvements, and to pay back taxes.

The city will spend an estimated \$40 million to rebuild the fire-damaged trestle; rehabilitate the branch and connect it to existing rapid transit lines; and buy new rolling stock. During the three years which such rehabilitation is expected to require, the railroad will operate the branch under a lease calling for a rental of an amount equal to current taxes, or about \$385,000 a year. The sale agreement includes provisions protecting jobs and seniority of all affected railroad employees.

The court has also before it revised agreements between the Long Island and the Pennsylvania and the New York Connecting, under which the Long Island would receive retroactive payments totaling more than \$750,000, and additional annual payments of about \$500,000 per year for freight lighterage in New York harbor, and for use of its Bay Ridge branch trackage. The agreement with the Pennsylvania would increase from 35 to 40 cents per ton, retroactive to July 1 of this year, the amount received by the L.I. for floating freight across the harbor for the Pennsylvania, and includes a lump sum payment of \$245,000 to compensate the Long Island for losses allegedly incurred in this service prior to

The agreement with the New York Connecting would provide for payment to the L.I. of \$200,000 as additional compensation for use of its Bay Ridge branch for the year 1950 and an increased annual rental for such use of some \$350,000, beginning as of January 1, 1951.

In submitting these agreements to the court, William H. Draper, Jr., L.I. trustee, indicated that no change was proposed in agreements covering the Long Island's use of Pennsylvania station in New York; in arrangements under which accounting, bookkeeeping and other services are now performed by the Pennsylvania for the Long Island, or in the arrangement under which the L.I. carries its normal insurance requirements in the P.R.R.'s joint insurance fund.

#### **New Securities**

Applications have been filed with the

LC.C. by:

GREAT NORTHERN. — To assume liability for \$16,950,000 of equipment trust certificates, to finance in part 43 diesel-electric locomotive units and 2,050 freight cars. Estimated total cost of the equipment is \$22,815,650.

e eq	uipment is \$22,810,000.	
	Description Estimate	
	and Builder Unit Co	st
14	1,500-hp. "A" freight units	
	(Electro-Motive Division, General	
	Motors Corporation)\$172,37	0
7	1.500-hp. "B" freight units	
	(Electro-Motive) 157,27	0
2	1,500-hp. "A" passenger units	
	(Electro-Motive)	0
2	1,500-hp. "B" passenger units	
	(Electro-Motive) 165,27	0
1	1,500-hp. "A" freight unit, with	
	steam generator (Electro-Motive) 177,77	0
1	1,500-hp. "A" freight unit, with-	
	out steam generator (Electro-	
	(Motive) 165,27	0
15	1,500-hp. road switching units	
	(Electro-Motive) 184,12 1,500-hp. "B" freight unit	20
1	1,500-hp. "B" freight unit	
	(Electro-Motive) 156,67	0
950	50-ton steel-sheathed box cars	
	(company shops) 6,50	10
50	50-ton passenger-train box cars,	
	with high speed trucks (com-	
	pany shops) 16,00	0
700	75-ton steel ore cars	
	(American Car & Foundry Co.) 6,33	0
300	70-ton steel drop-bottom hopper	
	cars (American Car & Foundry	
	Co.) 8,21	3
50	50-ton steel-frame express re-	
	frigerator cars, with high speed	
	trucks (Pacific Car & Foundry	_
	Co.) 26.00	O

Co.)

The certificates, to be dated December 1, would mature in 30 semiannual installments of \$565,000 each, beginning June 1, 1952. They would be sold by competitive bids, with the interest rate to be set by such bids.

NORTHERN PACIFIC.—To assume liability for \$3,420,000 of equipment trust certificates, to finance in part 23 diesel-electric locomotive units and 200 freight cars. Estimated total cost of the equipment is \$4,281,514.

rne	equipment is \$4,201,314.	
	Description	stimated
	and Builder	Init Cost
		11111 0021
	4 1,000-hp. switching units	
	(American Locomotive Company) \$	101,110
	2 6,000-hp. freight locomotives,	
	each consisting of two "A" and	
	two "B" units (Electro-Motive	
	Division, General Motors Corpo-	
	ration)	661,794
	1 1.500-hp. "B" unit	
	(Electro-Motive)	157 661
	2 1 000 L //A//	101,001
	2 1,500-hp, "A" units	
	(Electro-Motive)	1//,251
	4 1.500-hp. road-switching units	
	(Electro-Motive)	148.295
	3 1.200-hp, switching units	,
	(Flanta Mation)	102 422
	(Electro-Motive)	102,032
	1 1,500-hp. "B" passenger unit	
	(Electro-Motive)	160,246
20	0 70-ton steel ore cars	
20	(company shops)	4 000
-	(company shops)	h 20
	he certificates, to be dated Novem	Der .30,
WOL	ild mature in 15 annual installments o	1 \$288,-

000 each, beginning November 30, 1952. They would be sold by competitive bids, with the interest rate to be set by such bids.
PITTSBURGH & LAKE ERIE.—To assume liability for \$6,435,000 of equipment trust certificates, to finance in part 1,500 new freight cars costing an estimated \$8,633,000, as follows:

Description

Estimated

15 2 

sold on competitive bids which would have interest rate.

WESTERN MARYLAND.—To issue \$14,950,000 of general mortgage bonds to complete the refinancing of its first mortgage, 4 per cent bonds, due October 1, 1952, and outstanding in the amount of \$14,950,865.62. The new bonds would be issued under the new general mortgage created in 1949, when the refinancing program got under way. They would be 25-year bonds, dated November 1, 1951, and having a maturity date of November 1, 1976. They would be sold on the basis of competitive bids which would fix the interest rate.

Division 4 of the I.C.C. has author-

CHICAGO, ROCK ISLAND & PACIFIC.—To assume liability for \$5,250,000 of series K equipment trust certificates, to finance in part 15 diesel-electric locomotives and 900 box cars costing an estimated \$7,930,110. (Railway Age, September 24, page 73). Division 4 approved sale of the certificates for 99.17996, with interest at 234 par cent—the bid of Halsey, Stuart & Co.—which will make the average annual cost of the proceeds approximately 2.88 per cent. The certificates, dated November 1, will mature in 30 semiannual installments of \$175,000 each, beginning May 1, 1952. The certificates were reoffered to the public at prices yielding from 2.05 to 2.925 per cent, according to maturity.

#### Security Price Averages

	Oct. 30	Prev. Week	Last Year
Average price of 20 rep sentative railway sto	cks 53.12	54.66	46.92
Average price of 20 rep sentative railway bor		92.25	94.55

#### **Dividends Declared**

ATLANTA & WEST POINT.—\$1, payable December 15 to holders of record December 5.
GREAT NORTHERN.—non-cumulative preferred,
November 21.
KANSAS CITY SOUTHERN.—common, \$1.25,
payable December 15 to holders of record November 30; 4% preferred, \$1, quarterly, payable January 15, 1952 to holders of record December 31.

December 31.

MAINE CENTRAL.—5% preferred, \$2.50, accumulated, payable December 1 to holders of record November 15.

NASHVILLE, CHATTANOGA & ST. LOUIS.—75c, quarterly; extra, 25c, both payable December 3 to holders of record November 8.



### THANK YOU ALL

Birthdays come and go, but October 15, 1951 will be a day that we of the Lackawanna shall long remember.

Not only because it was the Lackawanna's One Hundredth Anniversary, but because of our friends who were so generous and cooperative in helping us to make it a memorable occasion.

To the advertisers in Railway Age of October 15, for their salutes to the Lackawanna and their congratulatory messages, and to Railway Age for its feature articles and editorial published on the day of our anniversary, we take this means of saying

### "THANK YOU ALL"

The warmth of your greeting and your friendliness intensifies our aim to make the Lackawanna ever a better railroad in the years ahead. To this ideal we dedicate ourselves with earnestness and deep resolve.

\*\*The warmth of your greeting and your friendliness intensifies our aim to make the Lackawanna ever a better railroad in the years ahead. To this ideal we dedicate ourselves with earnestness and deep resolve.

\*\*President\*\*

Lackawanna Railroad



PENNSYLVANIA.—50c, payable November 30 holders of record November 5. READING.—4% 1st preferred, 50c, quarterly, ayable December 13 to holders of record No-

ayable December 13 to holders of record Roember 21.

SOUTHERN.—common, \$1; 5% non-cumulative
referred, \$1.25, quarterly, both payable Deember 12 to holders of record November 15.

WEST JERSEY & SEASHORE.—6% special guarnoted, \$1.50, semiannual, payable December 3
holders of record November 15.

WESTERN MARYLAND.—7% 1st preferred, \$7,
ccumulated, payable November 30 to holders
f record November 15.

WESTERN OF ALABAMA.—\$3, payable Deember 15 to holders of record December 5.

#### RAILWAY OFFICERS

### FINANCIAL, LEGAL & ACCOUNTING

Charles A. Menninger, assistant treasurer of the Atchison, Topeka & SANTA FE, has been appointed secreand treasurer, succeeding Homer B. Fink, who has retired after 52 years of service. Chester A. Holcombe, general cashier, succeeds Mr. Menninger as assistant treasurer.

Mr. Menninger started his Santa Fe career in Topeka, Kan., as a clerk in the freight auditor's office in 1911. He transferred to the cashier's department in 1912 and then to Chicago as assistant cashier in 1916. He returned to Topeka in 1918 as assistant pay-



Charles A. Menninger

master and held that position until 1929, when he was promoted to chief clerk. Mr. Menninger has been assistant treasurer at Topeka since 1937.

Mr. Fink entered Santa Fe service in 1899 as a clerk in the freight auditor's office at Topeka. He became clerk in the treasury department in 1901, assistant cashier in 1906 and assistant paymaster in 1914. He was appointed cashier in 1916, and in 1923 was named assistant treasurer. He was appointed secretary and treasurer of the company in 1935.

John A. Oehlschlaeger, auditor of revenues of the ERIE at Cleveland, has retired after almost 47 years of service with this road. Mr. Oehlschlaeger was born at Richmond, Va.,

and joined the Erie in 1905 as a clerk in the freight accounts office. He advanced through various clerical positions and worked as traveling auditor for seven years until 1932, when he became chief clerk to the auditor of revenues. In 1936 he was promoted to assistant auditor of revenues and the following year became auditor of rev-

William J. Manning, assistant auditor of revenues of the Erie, has been appointed auditor of revenues at Cleveland, Ohio. George H. Smith, assistant to treasurer, has been promoted to assistant treasurer at Cleve-land, succeeding Harry W. Trumpler, retired. Mr. Manning was born at Belleville, N. J., 47 years ago and joined the Erie at the age of 14 as a

mail sorter. He subsequently served as office boy and advanced through various clerical positions in the auditor of revenues offices at New York. He went to Cleveland in 1931 when the Erie's general offices moved there. Mr. Manning was appointed special ac-countant in 1944, assistant to audi-tor of revenues in 1945, and assistant auditor of revenues on July 1, 1946.

G. O. Eiler, freight claim agent for the Green Bay & Western, has been appointed general freight claim agent, with headquarters as before at Green Bay, Wis.

Richard C. Beckett, general attorney for the Illinois Central, has retired after 39 years of service. (Continued on page 103)

#### Selected Income and Balance-Sheet Items of Class I Steam Railways in the United States

Compiled from 127 reports (Form IBS) representing 131 steam railways. (Switching and Terminal Companies Not Included)

	United States			
Income Items	For the month of June 1951 1950		For the six months of 1951 1950	
1. Net railway operating income	\$63,930,048	\$90,025,716	\$388,044,693	\$346,295,608
2. Other income	28,065,803	22,682,958	117,396,203	112,685,498
3. Total income	91,995,851	112,708,674	505,440,896	458,981,106
4. Miscellaneous deductions from		,,		
income	3,638,915	3,903,048	29,127,332	22,818,107
5. Income available for fixed charges	88,356,936	108,805,626	476,313,564	436,162,999
6. Fixed charges:	0010001200	200/000/020		
6-01. Rent for leased roads and				
equipment	9,704,655	8,152,378	56,968,618	56,478,789
6-02. Interest deductions <sup>1</sup>	25.043,527	25,154,294	149,039,899	149,997,164
6-03. Amortization of discount on				,,
funded debt	234,024	224,980	1.384,466	1,295,991
6-04. Total fixed charges	34,982,206	33,531,652	207.392.983	207,771,944
7. Income after fixed charges	53,374,730	75,273,974	268,920,581	228,391,055
8. Other deductions	3,182,432	3,187,621	18,553,163	19,144,329
9. Net income	50,192,298	72,086,353	250,367,418	209,246,726
10. Depreciation (Way and structures and	,			
Equipment)	37,640,189	35,725,621	220,276,244	210,864,522
11. Amortization of defense projects	3,375,372	1,372,254	19,318,953	8,237,366
12. Federal income taxes	42,683,026	34,590,843	253,686,282	147,486,538
13. Dividend appropriations:				
13-01. On common stock	16.943,267	13,276,309	107,930,166	81,793,689
13-02. On preferred stock	2.286,343	1,464,695	57,392,100	32,667,172
Ratio of income to fixed charges		-,,-,	,,	
(Item  5 + 6 = 04)	2.53	3.24	2.30	2.10
,				

	Ratio of income to fixed charges		_,,_		
	(Item $5 \div 6 = 04$ )	2.53	3.24	2.30	2.10
		United States			
				Balance at end of June	
	Selected Expenditures and Asset Items	8		1951	1950
17.	Expenditures (gross) for additions and bett	erments-Road		\$152,441,563	\$119,683,462
	Expenditures (gross) for additions and bett			507,697,477	372,478,238
19.	Investments in stocks, bonds, etc., other t	than those of a	ffiliated com-		
	panies (Total, Account 707)			472,318,095	467,671,860
20.	Other unadjusted debits			117,255,477	105,632,206
21.	CashTemporary cash investments			820,516,210	836,239,628
22.	Temporary cash investments			857,251,142	874,354,114
23.	Special deposits			123,782,079	120,748,422
24.	Loans and bills receivable			1,846,872	1,036,671 54,799,677
	Traffic and car-service balances—Dr			55,234,180 161,158,985	130,657,802
20.	Net balance receivable from agents and con	iductors		418,043,586	269,749,311
21.	Miscellaneous accounts receivable Materials and supplies			880,059,501	710.812,348
20.	Interest and dividends receivable			14,617,156	11,884,916
29.	Accrued accounts receivable			220,106,069	177,856,694
	Other current assets.			34.561.144	32,918,246
UL.	Other current assets			02,001,122	0217201
32.	Total current assets (items 21 to 31)			3,587,176,924	3,221,057,829
	Selected Liability Items				
	Funded debt maturing within 6 months2			\$159,115,835	\$136,194,281
41.	Loans and bills payable:			11,704,167	4,663,449
42.	Traffic and car-service balances—Cr			104,402,342	92,619,421
43.	Audited accounts and wages payable			551,480,743	448,771,398
44.	Miscellaneous accounts payable			247,125,293	216,307,646
45.	Interest matured unpaid			44,866,413	46,705,358
40.	Dividends matured unpaid			15,898,012	16,322,657
40	Unmatured dividends declared			60,719,748 23,597,033	60,828,624
40.	Accrued accounts payable			230,507,972	14,746,847 177,083,885
50	Taxes accrued			808.053,272	582,683,835
51	Other current liabilities			94,995,993	97,137,718
91.	Other current nationals			94,770,770	71,131,110
52.	Total current liabilities (items 41 to 51)			2,193,350,988	1,757,870,838
53.	Analysis of taxes accrued:				
	53-01. U. S. Government taxes			635,817,858	422,369,379
	53-02. Other than U. S. Government taxe			172,235,414	160,314,456
54.	Other unadjusted credits			297,363,905	268,851,911
I B	epresents accruals, including the amount in d	lofault			

Represents accruals, including the amount in detault.

Includes payments of principal of long-term debt (other than long-term debt in default) which becomes due within six months after close of month of report.

Includes obligations which mature not more than one year after\_date of issue.

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ge



# WILL HIT LIKE THIS

Picture yourself behind the wheel in an automobile crashing into a truck at 45 miles per hour.

The energy of such an impact is comparable to that of a loaded railroad box car (169,000 lbs.) coupling with a standing car at six miles per hour. Practically no freight moves by rail that is not subjected to such or even greater hump-yard impacts.

Hump-yard impacts are the bogeymen of modern railroad freight handling. There is only one answer . . . improved cushioning . . . WAUGHMAT TWIN CUSHIONS.

WAUGHMAT TWIN CUSHIONS, the double action steel and rubber draft gear, have no solid point. TWIN CUSHIONS provide complete protection for cars and lading against the majority of excessive hump-yard coupling impacts.

Specify TWIN CUSHIONS on your new cars or for draft gear replacement on existing cars.

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Zout of 5 home-cars, on the average, are on home lines at all times. Hence 2 out of 5 of your lading damage claims can be charged to your own cars, on your own line, under your own operation.

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maintenance

is one feature of General Motors Diesel locomotives that nearly every railroad man knows about.

The GM Diesel engine was designed with ease of service and interchangeability of parts as prime considerations. It is possible to replace wearing parts without dismantling a large part of the engine. Pistons and liners can be changed without removing the roof hatch. And most engine parts can be readily inspected without removal from the engine.

These—plus long-life design and manufacture—are reasons why General Motors Diesel locomotives take less time out for servicing and cost less to maintain.

### ELECTRO-MOTIVE DIVISION

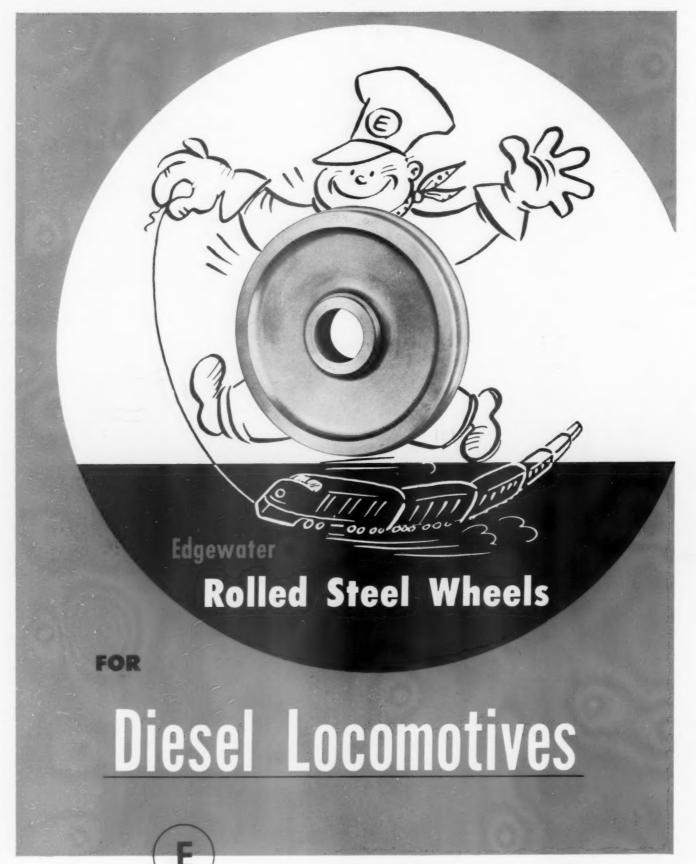
GENERAL MOTORS



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Home of the Diesel Locomotive

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reight (



Passenger Car



and Diesel Locomotive Rolled Steel Wheels

#### OPERATING

Arthur C. McCarthy, general superintendent for the Gran. Trunk Western, has been appointed general manager (Railway Age, October 15). Mr. McCarthy began his railroad service in 1918, as demurrage inspector for the G.T.W. and has been in continuous service with the same road



Arthur C. McCarthy

since. He was named traveling inspector in 1919, demurrage supervisor in 1923 and district supervisor of car service in 1927. Promoted to superintendent of car service in 1939, he became superintendent of transportation in 1945 and three years later was appointed general superintendent.

Major J. G. MacLachlan, manager of the Hudson Bay Railway, retired on September 4 after 46 years of railway service. On that date the Hudson Bay became a Canadian National operating division and N. S. Devenny was appointed superintendent of the division, with headquarters at The Pas, Man. J. C. Crombie, trainmaster, has been promoted to assistant superintendent of the division and R. M. Milne, a conductor at Prince Albert, B. C., has been promoted to trainmaster of the new division.

Major MacLachlan entered railway service in 1906 at Brandon, Man., where he served as chainman and rodman. From then on he worked on construction of lines from northern Ontario through to British Columbia, in various engineering capacities. He was appointed division engineer at Kamloops, B. C., in 1919 and was transferred to The Pas, Man., in 1926. He served in several posts on the Hudson Bay before his appointment as manager in 1943.

The Illinois Central has created a second general managership; S. F. Lynch, former general manager, becomes general manager of territory south of the Ohio river, with headquarters at Memphis, while Clyde J. Fitzpatrick, general superintendent of transportation, has been ap-

pointed general manager of northern territory, with headquarters at Chicago. O. H. Zimmerman, assistant to vice-president, succeeds Mr. Fitzpatrick as general superintendent of transportation. A photograph and biographical sketch of Mr. Zimmerman appeared in Railway Age April 30, page 57, coincident with his appointment as assistant to vice-president

Mr. Lynch joined the I. C. in 1911 as a clerk in the mechanical department at Jackson, Miss. He later served as chief clerk to the master mechanic at McComb, Miss., as chief clerk to the superintendent at Vicksburg, and as a trainmaster on the Vicksburg and Springfield divisions following World War I. Mr. Lynch became office man-



S. F. Lynch

ager to the vice-president and general manager in 1940. Two years later he was appointed general superintendent of transportation and in 1945 became general manager.

Mr. Fitzpatrick began his I. C. career as a telegraph operator in 1924. He later served as a dispatcher on the former Wisconsin, Springfield and St. Louis divisions; as chief clerk in the



Clyde J. Fitzpatrick

mechanical department at Markham yard, Chicago; and as a telegraph operator, station inspector, assistant yardmaster, and assistant trainmaster on the Chicago Terminal. Mr. Fitzpatrick became trainmaster at Freeport, Ill., in January 1941 and trainmaster at McComb, Miss., later that year. In 1942 he was promoted to superintendent of the Springfield division, and, in January 1945, to superintendent of the Iowa division. His appointment as general superintendent of transportation came in March 1945.

#### TRAFFIC

As reported in Railway Age October 8, Carl W. Sunderbrink has been appointed freight traffic manager of the New York Central System at Cleveland. Born at Blackburn, Mo., on November 11, 1895, Mr. Sunderbrink entered railroad service on May 6, 1916, with the Cleveland, Cincinnati, Chicago & St. Louis (N.Y.C.) and served in various clerical and traveling positions at Kansas City, Cin-



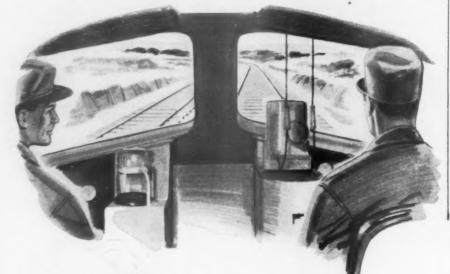
Carl W. Sunderbrink

cinnati and Cleveland before being named general agent at Pittsburgh in 1929. He was appointed division freight agent of the Pittsburgh & Lake Erie (N.Y.C. affiliate) at Youngstown in 1935 and returned to Pittsburgh as assistant to the freight traffic manager and industrial agent in 1941. Mr. Sunderbrink was promoted to general freight agent of the P.&L.E. later that year and of both the P.&L.E. and the N.YC. in 1944.

Raymond L. Colquitt has been appointed general agent of the FLORIDA EAST COAST at Atlanta, Ga., succeeding Duncan D. Haigler, deceased.

Charles G. Andrews, assistant general freight agent of the ERIE at Youngstown, Ohio, has been transferred to Pittsburgh, succeeding Charles E. King, who has retired after 42 years of service with this road. Wilbur W. Thoms, general agent at Springfield, Ohio, has been appointed division freight agent at Jamestown, N. Y., succeeding Don-(Continued on page 106)

# Looking Ahead



# with MO-PAC



Looking ahead to its second century of service, MO-PAC continues to live up to its reputation as a "Modern-Progressive" railroad. For with the addition of 126 new units, early next year, MISSOURI PACIFIC Lines' fleet will consist of about 700 diesels.

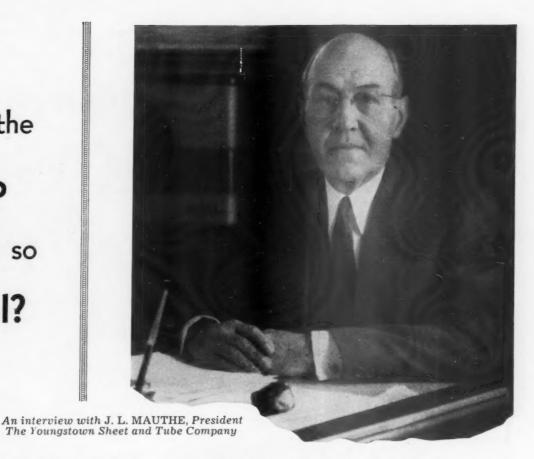
This will mean better and faster service for shippers and passengers alike, for all main lines of MO-PAC's 10,000-mile system will be completely or partially dieselized and radio equipped... a record matched by few railroads in the entire nation.



MISSOURI PACIFIC LINES

A CENTURY OF SERVICE TO THE WEST-SOUTHWEST

Why is the scrap situation so critical?



Why are you concerned about iron and steel scrap, Mr. Mauthe?

Our inventories are critically low and the present scrap flow is not sufficient to maintain capacity steel plant operations. Furthermore, if the flow of scrap is not increased, a curtailment of steel production is inevitable.

The industry is using all the pig iron and all the home scrap that is available. The balance of our metallic requirements must be made up through procurement of purchased scrap. Every ton of scrap that we do not get represents a ton of steel that we cannot make.

How much scrap does the industry need? In 1950, 96,700,000 tons of steel ingots and castings were produced, requiring over 61,000,000 tons of iron and steel scrap.

In 1951, over 65,000,000 tons of scrap will be required, and even more will be needed in 1952.

Where does scrap come from?
About 58% of the total scrap required is produced by the ingot and casting makers, and is known as "home" scrap; the balance of 42% is "purchased" scrap and is procured from outside sources.

Purchased scrap generally falls into two categories: Scrap from current fabrication and that which is the result of obsolescence.

There are three important sources from which we get obsolete scrap, much of which is dormant:-

- Obsolete machinery and equipment in every industrial plant, at the oil fields and on the farms.
- 2 Battlefield scrap, obsolete ships and war material, surplus machinery and equipment, which government can make available.
- 3 Countless old automobiles and trucks, which are rusting away in automobile wrecking yards in every section of the country.

What can be done to increase tonnage of purchased scrap?

This scrap must be made available immediately! All industry and government must awaken to the critical nature of the situation. They must realize that if we do not get the scrap, they will not get the steel!

YOU CAN HELP - YOU MUST HELP! NO SCRAP - NO STEEL



The Youngstown Sheet and Tube Company

Youngstown, Ohio

When the chips are down and you are up against it



When you get up against a tough shipping problem just call your Santa Fe freight man... let him work it out and make it easier for you.

F. H. Rockwell, Gen. Freight Traffic Manager Santa Fe System Lines, Chicago, Ill. (Continued from page 103)
ald S. Day, who replaces Mr. Andrews at Youngstown. John L.
Tjaden, commercial agent at Des
Moines, Iowa, has been appointed general agent at Springfield, succeeding
Mr. Thoms.

#### MECHANICAL

A. C. Melanson, works manager of the Canadian National at the Point St. Charles shops at Montreal, has been appointed chief of motive power and car equipment, succeeding E. R. Battley, who has retired on pension, after nearly half a century of railroad service. Mr. Melanson was born at Scoudouc, N. B., and entered railroad service with the Intercolonial (now C.N.) in 1911 as machinist apprentice in the mechanical department at Moncton, N. B. He subsequently served as draftsman, material inspector, and superintendent of motive power and car shops at St. Malo, Que. In February 1939 he became superintendent of motive power and car



A. C. Melanson

equipment of the Quebec district and in 1943 was named superintendent at Toronto. Mr. Melanson was appointed works manager of the Point St. Charles shops in 1944.

Mr. Battley was born at Stratford,

Ont., on October 21, 1886, and entered railroad service in December 1902 as machinist apprentice with the Grand Trunk (now C.N.) at Stratford. He subsequently served as machinist, inspector, locomotive foreman, general foreman, master mechanic and superintendent motive power. In 1927, when union-management cooperative committees were being developed on the C.N., Mr. Battley was the machinist member of the committee of experts organized by the railway's Bureau of Economics to study the technical features of the plan which is still in operation today. In 1930 he was appointed assistant general su-perintendent of motive power at To-ronto and in July 1932 he was loaned to the National Railways of Mexico to conduct a study of machine shops and

# **GET** big truck advantages at small truck cost with YALE WORKSAVERS



YALE WORKSAVER Electric Hydraulic Lift Trucks are built for loads up to 6,000 lbs., and are ideally designed to accommodate skids or pallets. Their wide acceptance throughout industry is based on the YALE reputation for top perform-

**GET AN EYE-OPENING DEMONSTRATION** RIGHT IN YOUR OWN PLANT OR WAREHOUSE Your YALE Representative will demonstrate the

cost-cutting advantages of the rugged WORK-

SAVER line to you. All you have to do is name the

time and place. Naturally, there is no obligation.

ance in electric trucks of every kind.

SAVE TIME AND SPACE. Move giant loads up to 185 feet per minute—with safe, easy speed control. Utilize all storage and production control. age and production areas.

SAVE MUSCLE POWER. Transport and lift capacity loads with a smooth flow of power that's easy on the operator, easy on the load.

HANDLING COSTS. Mechanize handling on low-load floors; in freight elevator operations; and in other areas where weight or space rule out









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Please have your local Representative call on me.
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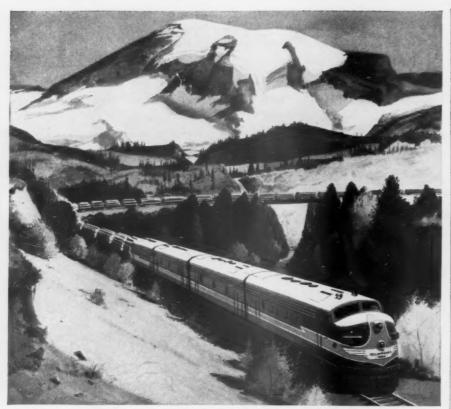
age"-truck, battery, battery charger. The YALE Selenium Charger saves time by charging WORKSAVERS

Be sure to ask about the famous WORKSAVER "pack-

right on the job.

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YALE GAS AND ELECTRIC INDUSTRIAL TRUCKS . YALE HAND TRUCKS . YALE HAND AND ELECTRIC HOISTS



Logging train near Mt. Rainier, Wash.

# ON THE WAY!

Big timber from the mountain to the mill—raw materials from field and mine to the centers of industry—finished products from factory to consumers everywhere. Yes, the nation is really on the way to stepped-up production for peace and defense.

The Milwaukee Road is on the

way, too—on the way forward to even higher standards of transportation service. "If it's good, make it better"—that's the word on the Milwaukee these days! Milwaukee Road agents are in principal cities. Call on the one nearest you for transportation counsel.

#### SHIP-TRAVEL

Look at the map!



# THE MILWAUKEE

ROAD ROUTE OF THE

CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD

prepare recommendations for these establishments. On his return to Canada, Mr. Battley became superintendent of shop methods at Montreal and in 1933 he was appointed general su-



E. R. Battley

perintendent in the motive power and car equipment department at Toronto. He was promoted to chief of motive power and car equipment at Montreal in October 1942.

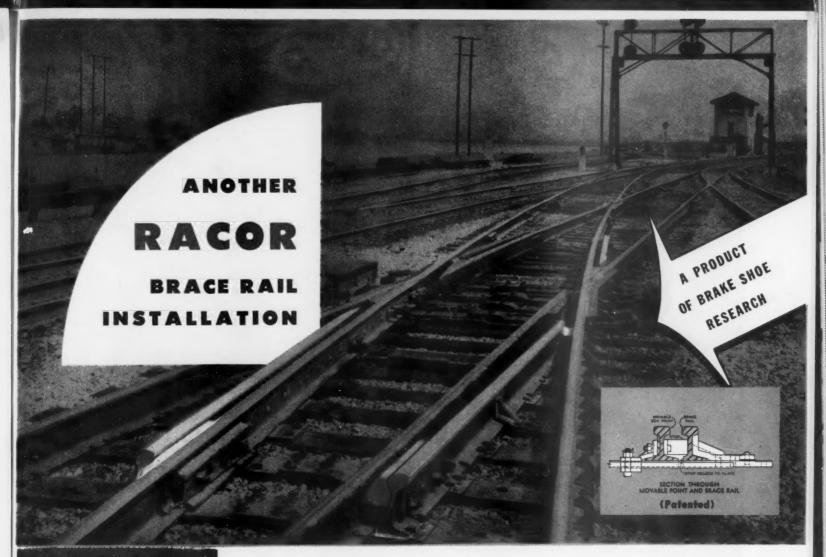
#### PURCHASES & STORES

Arthur V. Sorenson, division storekeeper of the Atchison, Topeka & Santa Fe at Winslow, Ariz., has been appointed division storekeeper at Clovis, N. M., succeeding T. L. Wilson, who has retired after 42 years of Santa Fe service. Joseph F. Dooley, division storekeeper at Dodge City, Kan., succeeds Mr. Sorenson at Winslow.

Charles E. Morshead has been appointed purchasing agent of the Newfoundland district of the Canadian National at St. John's Nfld. A native of Plymouth, England, Mr. Morshead joined the C.N. in 1916 as junior clerk in the purchases and stores department at Montreal and in 1939 was loaned to the Defense Purchasing Board. He returned to the C.N. in 1947 as senior buyer, and was appointed chief clerk in 1948. In December 1950 he became accountant for the general purchasing department at Montreal, where he remained until his recent appointment.

### ENGINEERING AND SIGNALING

C. S. Kirkpatrick, whose retirement as chief engineer of the Missouri Pacific was announced in Railway Age October 1, began his railroad career with the Missouri & North Arkansas (later the now defunct Missouri & Arkansas), in 1901. He subsequently held positions with the Houston & Texas Central (now Texas & New Orleans), the St. Louis & San



America's most complete line of track specialties

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VERTICAL SWITCH RODS

SAMSON SWITCH POINTS

SWITCH POINT

RAIL LUBRICATORS

CROSSINGS

REVERSIBLE MANGAMESI STEEL CROSSINGS

MANGANESE STEEL



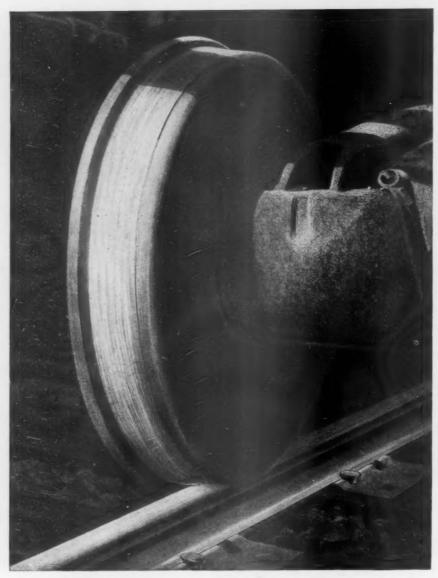
# That brings operation and maintenance economies

- 1 Provides improved alignment and surface of Movable Point Crossings and Slip Switches.
- 2 Permits high speed with safety.
- 3 Ties the entire crossing into one unit.
- 4 Gives the same lateral support for the flexible portion of Movable Points as that provided by stock rails in ordinary switches.
- 5 Makes the use of straps and other arrangements for the prevention of creepage unnecessary.
- 6 Because of ruggedness of structure, maintenance costs, especially at heel joints, are materially reduced.

**Brake Shoe** 

RAMAPO AJAX DIVISION

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# Prime Mover...

of the goods this country needs for national defense, and for its daily life and work, is the flanged wheel on the steel rail. Day and night — all across the face of the nation — at all seasons of the year—freight trains roll, carrying raw materials and finished goods, products of farm and forest and mine, of mill and factory.

Doing the big, basic transportation job that nothing else can do, the railroads need adequate income based on today's cost of operation. Only in this way can they be kept fit to do their job—the job of moving more tons of freight, more miles, at a lower average charge than any other form of general public transportation in the world.

# **Association of American Railroads**



WASHINGTON 6, D.C.

Listen to THE RAILROAD HOUR every Monday evening on NBC.

Francisco (now St.L.-S.F.), and the Guggenheim Exploration Company. In 1913 he was appointed chief engineer for the Cape Girardeau & Northern (since abandoned), and from 1914 to 1926 he served as chief engineer for the Gulf Coast Lines. In 1926 he was



C. S. Kirkpatrick

appointed chief engineer for the Gulf Coast, the International-Great Northern and several other subsidiaries of the M.P.

Edward Andrew Burgin has been appointed signal engineer of the Chesapeake & Ohio at Richmond, Va., Mr. Burgin was born on April 24, 1908, at Philadelphia, and entered railroad service in 1925 with the Pennsylvania. He joined the C. & O. in 1929, serving successively as signalman, leading signalman, signal foreman, circuit designer, signal inspector, assistant supervisor and supervisor. Mr. Burgin was appointed general signal inspector in 1946, which position he held until his recent appointment as signal engineer. He has been chairman of Committee VII, Signal Section, Association of American Railroads, since 1949.

Theodore L. Carlson has been appointed assistant superintendent of signals of the CHESAPEAKE & OHIO at Richmond, Va. Mr. Carlson was born on December 16, 1902, at Litchfield, Minn., and attended Carleton College. He entered railroad service in March 1923 with the Great Northern on signal construction and maintenance, becoming signal draftsman in August 1925. Mr. Carlson joined the Norfolk & Western in April 1928 as signalman and draftsman at Roanoke, Va. In May 1929 he went with the C. & O. as circuit designer and in June 1940 was promoted to chief circuit designer, becoming circuit engineer in January 1947. He was promoted to signal engineer in August 1948, which position he held until his appointment as assistant superintendent of

The telegraph department of the NORTHERN PACIFIC has been renamed



WHETHER YOU'RE SHIPPING from the Northwest—Chicago, Detroit, Toledo, Cleveland—or from the Virginias, Carolinas and the Southeast to the western areas, the Chesapeake and Ohio offers you a "daily double" speed schedule via "The Expediter" east-bound and "The Speedwest" westbound. Yes, your freight really travels on the double when it travels aboard either of these speed-merchants—for on either

run you save a full day. "The Speedwest" operates from Norfolk-Newport News, the Carolinas and the Southeast to Chicago, Toledo, connecting at Toledo with Pere Marquette District trains for Michigan and the Northwest via C & O car ferry service. "The Expediter," in the opposite direction, speeds freight from the Northwest and the Great Lakes area to the Virginias, the Carolinas and the Southeast.

So whether your freight is eastbound or westbound, you're bound to save a day the C & O twin-speed way.



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- 3. Near-by Graybar Representatives to provide up-to-the-minute forecasts of local delivery conditions and material availability.
- $\bf 4.$  Catalog and quotation service on the more than 100,000 electrical supplies distributed by Graybar.

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the communications department. F. L. Steinbright, superintendent of telegraph, becomes superintendent of communications; R. B. Johnson, assistant superintendent of telegraph, will be known as assistant superintendent of communications; with headquarters at St. Paul; and F. A. Mackenroth, assistant superintendent of telegraph at Seattle, becomes assistant superintendent of communications at that point.

#### SPECIAL

John G. Castle has been appointed director of training and employment of the New York Central System, as reported in *Railway Age* October 8. Mr. Castle was born at Yonkers, N. Y., in 1901 and entered the service of the N.Y.C. as a clerk in the purchasing department at New York in



John G. Castle

1916. He subsequently worked in the offices of engineer of maintenance of way and general claims attorney, and in 1935 was appointed secretary of the board of pensions. In 1942 Mr. Castle became assistant to manager of personnel and in 1943 was appointed assistant to vice-president of personnel serving in the latter capacity until his recent appointment.

James L. Powers, rules examiner of the Chicago, Rock Island & Pacific, has been named superintendent of rules, and is transferred from Kansas City to Chicago. J. A. Krause and H. B. Duryea have been appointed safety supervisors, with headquarters at Des Moines, Iowa, and Kansas City, respectively.

Dwight W. Norris, assistant director of publicity of the New York, New Haven & Hartford at New York, has been appointed director of development of Newsweek Magazine.

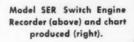
#### OBITUARY

Frank A. Hruska, 78, who served as chief claim agent of the New York Central System at Cleveland, from

Switch Engine USERS REPORT



WITH BARCO RECORDERS you can actually SEE what your switch engines are doing. The daily charts produced by each recorder give Operating Departments FACTS they need for planning efficient schedules and for correcting chronic delay situations.



- 1. Many Delays Eliminated
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Time standing idle reduced as much as 50% . . . better scheduling, more cars handled... greatly improved return on investment in equipment - these are just a few of the ADVANTAGES reported by the many users of BARCO SWITCH ENGINE RECORDERS!

Simple to install and easy to use, each Barco recorder is a precisionbuilt instrument that indicates (1) Speed, (2) Time, (3) Mileage and records (1) Speed, (2) Distance Traveled, (3) Time in Motion, (4) Time Idle. Find out about BARCO SWITCH ENGINE RECORDERS. Ask for Barco to give you the complete story without obligation. BARCO MANUFACTURING CO., 1800M Winnemac Ave., Chicago 40, Illinois.

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FREE ENTERPRISE-THE CORNERSTONE OF AMERICAN PROSPERITY



#### See the advantages of:

AIR-COOLED CLUTCH POWERFUL HYDRAULIC BRAKES

DOUBLE UNIVERSAL JOINT HEAVY DUTY TRANSMISSION

HOIST CYLINDER AND MAST the industry.

**DOUBLE ACTING TILT JACKS** HYDRAULIC PUMP CONNECTED DIRECTLY TO DRIVE SHAFT

FULL FLOATING DRIVE AXLE truck load.

EXTRA HEAVY FRAME

HEAVY, INDUSTRIAL-TYPE ENGINES
pecially for Town

Now you can see, in your own office, an informative 15-minute sound slide film entitled "WHAT MAKES IT TICK?" . . . showing Towmotor engineering features that cut handling costs in all phases of Receiving, Processing, Storage and Distribution.

When you see "WHAT MAKES IT TICK?" you'll see why Towmotor is faster and more agile; you'll see why Towmotor maintenance and operating costs remain low and give many extra years of troublefree service; you'll see WHY Towmotor operates 'round the clock on heavy handling jobs . . . cutting production costs as much as 60%.

Plan now to see "WHAT MAKES IT TICK?." To schedule a showing in your office at your conven-ience, SEND COUPON TODAY! No obligation!

TOWMOTOR CORPORATION

February 1, 1909, to October 31, 1943, died on September 19 at Toledo.

R. B. Ball, retired vice-president and general manager of the GULF, COLORADO & SANTA FE, died recently after having been confined to a hospital in Temple, Tex., for several weeks. Mr. Ball started with the Santa Fe in the engineering department while he was attending Stanford University, and after receiving his degree, rose rapidly in the engineering de-partment of the Coast lines. He became chief engineer in 1919. He became assistant chief engineer of the system in 1929 and was in charge of maintenance. He was promoted to assistant general manager of the G.C.& S.F. in 1936, and in 1939 was named vice-president and general manager. He retired from that post in 1948.

## ORGANIZATIONS

## A.S.T.M. Plans Special 50th Anniversary Meeting

To arrange and carry out a number of special events for the 50th anniversary meeting of the American Society for Testing Materials, to be held in New York City at the Hotels Statler and New Yorker during the week of June 23, 1952, a general committee on arrangements has been an extended the second of the second mittee on arrangements has been appointed, headed by A.S.T.M. Past President J. R. Townsend, materials engineer of the Bell Telephone Laboratories. Associated with Mr. Townsend are upwards of 75 active members and officers. At the organization meeting in September, announcement was made that numerous special symposiums were being developed as part of the technical program. In all, some 35 sessions will be necessary to take care of the large number of papers and re-

### A.S.M.E. Annual Meeting to Be Held at Atlantic City

Chalfonte-Haddon Hall, Atlantic City, N. J., will be headquarters for the 1951 annual meeting of the American Society of Mechanical Engineers, which will be held November 26 to 30, inclusive. A registration fee of \$5 will be charged nonmembers attending; for student nonmembers the fee will be \$1. The banquet will be at 6:45 p.m. November 28. The program, in part, is as follows:

> NOVEMBER 26 9:30 a.m.

Education-Management (I)-Junior (1) The Training of Young Engineering Graduates in

ustry:
rom the standpoint of a smaller company, by
W. Baughman, assistant vice-president, Union
itch & Signal Division of Westinghouse Air
ks Company.
rom the standpoint of a medium-size company,
E. G. Bailey, Bailey Meter Company, by H.
rom the standpoint of a larger company, by H.

## FORK LIFT TRUCKS and TRACTORS

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# Div. 21, 1226 E. 152nd St., Cleveland 10, Ohio I would like to see "What Makes It Tick?" COMPANY ADDRESS

HOW MANY PEOPLE HAVE YOU TALKED TO ABOUT AMERICANISM TODAY?



Though Bethlehem started making wrought-steel freight wheels more than a quarter-century ago, there are still quite a few of our people who remember those early days in the business. They remember what was said as production plans were being discussed. It went something like this:

"We've got to produce a wheel that will stand the gaff better than any wheel ever did before."

That meant setting our sights pretty high. But it has always been the cornerstone of Bethlehem wheel-making policy. Today, more than ever, it means a good, tough, long-lasting freight wheel... the kind that merits your confidence ... the kind that returns you a dollar's worth of service for every dollar spent.

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### BETHLEHEM WROUGHT-STEEL WHEELS

COMPANIONS TO BETHLEHEM FORGED-STEEL AXLES

Bethlehem passenger and locomotive wheels, like those for freight service, are made with the highest degree of skill and craftsmanship.





NEW STAND-UP MODEL "E" 2,000-LB. CAP. TIER-MASTER tiers 3 pallets high from an overall collapsed height of only 72". It easily enters truck bodies and low clearance doors.



DALLAS . ATLANTA . BERKELEY

C. Houghton, assistant to manager of personnel, Bethlehem Steel Company.

12:15 p.m.

2:30 p.m.

Gas Turbine Power (11)-Power (1)

The Gas-Turbine's Contribution to Gas-Line Pumping, by T. J. Putz, locomotive and turbine engineering, Westinghouse Electric Corporation.
A 5,000-Hp. Gas-Turbine Power Plant, by Bruce O. Buckland, engineer, and Donald C. Berkey, section engineer, gas turbine engineering division, General Electric Company.

9:30 a.m.

Panel Discussion: Effect of the Lubricating Oil pon Diesel and Gas-Engine Performance Lubrication, by John Gibb, Socony Vacuum Oil

mpany. gs, by E. W. Crankshaw, Cleveland Graph-

Company.

Bearings, by E. W. Crankshaw, Cleveland Grapnite Bronze Company.

Engines, by George Steven, Worthington Pump & Machinery Corp.

Filters, by F. Lee Townsend, manager, William W. Nugent & Co.

Liners and Pistons, by Stuart Nixon, Sealed Power Corporation.

5 p.m. Roy V. Wright Lecture

November 28 2:45 p.m. Railroad (1)

Economic and Efficient Lubrication of Waste Packed Journals, by L. D. Grisbaum, chief engineer, Railway Service & Supply Co.
Economic Study of Roller Bearings on Freight Cars, by O. J. Horger, chief engineer, Railway division, Timken Roller Bearing Company.

NOVEMBER 29 9:30 a.m.

Railroad (II)—Oil and Gas Power (IV)

Operating Experience of the Talgo Train, by Jerry
M. Gruitch, director, research and development,
American Car & Foundry Co.
Development of the General Motors Two-Cycle
Railway Diesel Engine, by E. W. Kettering, chief
engineer, Electro-Motive Division, General Motors
Corporation.

2:30 p.m.

Railroad (III)—Materials Handling (IV)

Progress in Railway Mechanical Engineering (Report of Committee RR-6 Survey), by T. F. Perkinson, committee chairman, manager, Commercial Engineering division, Transportation division, General Electric Company.

Symposium—Railroads and Highway Trailers—An Economic Solution to a Difficult Problem, by George L. Goebel, mechanical engineer, New York, New Haven & Hartford; H. R. Sampson, vice-president, Chicago & Eastern Illinois, and E. F. Ryan, president, Rail-Trailer Company.

H. W. Cook, general agent, freight department, of the Wabash, at Dallas, was recently elected president of the Passenger, Ticket & Freight Agents Association of Texas. Other officers elected were: First vice-president, Howard G. Cleveland, assistant general passenger agent. Missouri Pa-cific Lines, San Antonio; second vicepresident, George J. Adamcik, traveling freight and passenger agent, Northern Pacific, Dallas; and secretary-treasurer, J. G. Hatcher, general agent, Chicago, Milwaukee, St. Paul & Pacific, Dallas.

The Chicago Railroad Superintendents Association has elected the following officers to serve for the coming year: R. D. Clousing, division su-T. D. Ash, superintendent of terminals, Grand Trunk Western, vice-president; and C. K. Strader, superintendent, Baltimore & Ohio Chicago terminal, secretary-treasurer.

Arthur E. Wright, president and general manager of the Manufacturers Railway, the St. Louis & O'Fallon and

the St. Louis Refrigerator Car Company, will be guest of honor at the November 27 meeting of the Car Department Association of St. Louis, in accordance with the organization's practice of setting aside its November meeting each year to honor someone who has made an outstanding contribution to the mechanical department of the railroads. Mr. Wright will also be the principal speaker, his topic being "A Tribute to the Men in the Ranks." The meeting will be held in the Hotel DeSoto, St. Louis, at 8 p.m., with a social period beginning at 5:30 and followed by dinner at 6:30.

The annual dinner of the Traffic Club of Pittsburgh will be held on January 24, 1952, in the William Penn Hotel.

The National Railway Historical Society elected the following officers at its October 21 meeting in Philadelphia: President, E. G. Hooper, Baltiphia: President, E. G. Hooper, Battimore; vice-president, membership, E. L. Pardee, Collingswood, N. J.; vice-presidents, Central region, Ralph L. Cooper, Kansas City, Mo., and Richard Hinchey; secretary, James S. Myers, Philadelphia; treasurer, Hugh R. Gibb, Newark, Del.; editor, Leon R. Franks, Lancaster, Pa.; solicitor, Richard S. Clover, Abington, Pa.; and historian, Willard A. Hart, Upper Darby, Pa.

A Financial Study of

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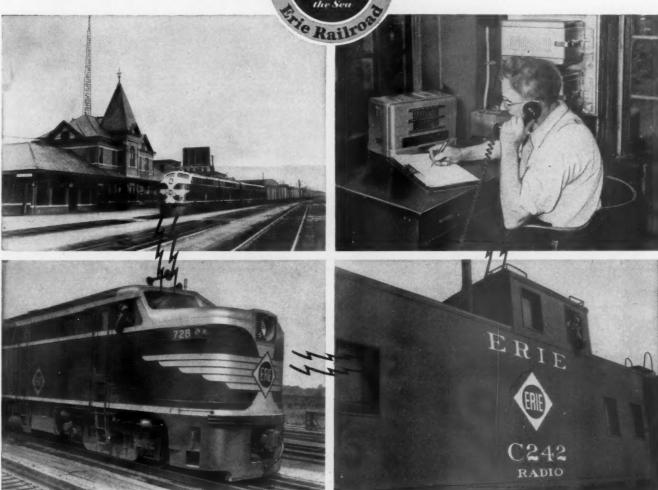
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ESTABLISHED 1857 ONE WALL STREET NEW YORK 5, N. Y. A MILESTONE IN 1851



AMERICAN HISTORY



# ERIE'S RADIO-TELEPHONE SYSTEM now covers entire mainline between New York and Chicago!

• Think how this modern communication system improves railroad performance, speeds up service and adds to Erie's fine record for safe, dependable transportation. For here's split-second communication between caboose and diesel locomotive, or between wayside stations and moving trains or a combination of all together.

This is the first complete mainline radio-

telephone installation on any American railroad and another of Erie's famous "firsts"! This improvement is typical of Erie's progressive railroading—building a better railroad for the safe, dependable transportation of passengers and freight.

Erie's newly completed radio system makes the railroad more than ever ready to serve our country well in peace or war.

Erie Railroad
SERVING THE HEART OF INDUSTRIAL AMERICA



### **Current Publications**

#### PAMPHLET

The Nation's Wood Supply. 22 pages, illustrations. American Forest Products Industries, Inc., 1319 Eighteenth st., N. W., Washington 6, D. C.

The purpose of this booklet is to present a concise, factual appraisal of this nation's present and potential forest resources and to cite what has been and is being done to assure adequate supplies of wood on a perpetual basis. As the booklet points out, much progress has been made toward putting all our timber resources on a continuous yield basis. Forestry in America definitely is on the upswing, yet much remains to be done. Effective programs for all timberland owners have been developed. The urgent need now is to secure wider participation in these programs.

#### TRADE PUBLICATION

Stainless Steel Handbook. 120 pages, charts, tables. Allegheny Ludlum Steel Corporation, Pittsburgh 22. Free.

To fill the growing needs of fabricators and design engineers for more complete on-the-job reference data, material contained in previous handbooks has been completely rewritten and categorized and

much additional information has been added. Approximately 40 different types of Allegheny Metal stainless steel are discussed and each type is covered from standpoints of analyses, fabrication, heat treatment and special conditions of service. The first of seven chapters in the book is concerned with selecting the proper type of stainless for a given application. A selector table containing about 30 types, including both nickel-chromium straight chromium steels, lists about 40 properties broken down in the general classifications of physical data, electrical properties, heat resistance, working and treating temperatures, mechanical properties and creep strength, A second group of tables in this chapter lists corrosion resistance of the steels to various media. including organic substances, acids and salts. Subsequent chapters discuss each type of stainless separately and in more detail and supply specific information about heat treating, fabrication and certain special conditions in service. Separate chapters are given over to discussions of heat resistant properties and low temperature properties of the metals.

#### FILM

What Makes It Tick? 15 min. Accompanied with sound record. Available for private showings through Townotor Corporation, 1226 East 152nd st., Cleveland

A catalog—in audio-visual form—of the outstanding design and engineering features of the five new fork lift truck models which Towmotor recently announced. In addition to detailing frame, body, power plant, travel and lift mechanisms, the film explains new features which offer easier handling and greater operator comfort, safety and convenience. A summary booklet is given to all production and operating officers who view the film.

#### BOOKS

The Steam Locomotive of Today. By M. P. Sells, O.B.E., M. I. Mech. E., M. I. Loco. E. 250 pages, illustrations. Published by Locomotive Publishing Company, 88, Horsejerry Road, Westminster, S.W.I., England. \$1.40.

A part of this book was originally written in 1934 for the African locomotive enginemen of the Nigerian Government Railway and was first published in 1936 under the title "How the Locomotive Works and Why." The book now includes also some notes on shop practice, tolerances, scrapping sizes, clearance limits, etc., as well as new and enlarged diagrams. In its chapters are discussed fuel and its combustion; evaporation of water into steam; principles of expansion of steam and work done during expansion; tractive force; brakes and brake equipment; lubrication; locomotive failures; duties of firemen and enginemen, etc.

Accident Prevention Manual for Industrial Operations. 800 pages, illustrations, diagrams, charts. Prepared by members of the National Safety Council's staff, in cooperation with safety specialists of numerous industries. N. S. C., 425 North Michigan ave., Chicago 11. \$9 for council members; \$18 for non-members.

Although intended for general industrial safety work, some of the material in this revised second edition of the manual may prove helpful to railroad safety, engineering, medical and mechanical officers, as the council has determined that a major portion of all accident causes are common to all industry. The new edition contains 256 more pages and 11 more sections than its pioneering predecessor. It also has, in addition to the table of contents, an exhaustive alphabetical index of subject matter, and each section has a separate list of its own contents. Because the manual is permanently bound, the council has arranged for reprints of various sections which may be purchased separately as desired. Among the more important subjects covered are materials handling hazards; boilers; hand and portable power tools; welding and cutting; electrical hazards; flammable liquids; fire prevention; fire control; personal protective equipment; industrial health engineering; medical services in industry; safety organization and training; and accident records, analysis and costs, plus an entirely new section called "The Safety Man's Resources"-a bibliography of safety organizations and publications.

# Industrial, Commercial and Agricultural Opportunities in the Territory of the NORFOLK SOUTHERN

Excellent plant sites adjacent to rail and highway, together with abundance of electric power and supply of water from rivers and surface wells, or locally from communities, are available. These sites are in a territory with mild climate, good supply of native-born, efficient labor, fair taxes, and friendly communities toward industry.

These site locations are ideal for chemical, paper, pulp, textile, shale products, plaster, and a host of other kinds of manufacturing and commercial activities. These sites are in communities centrally located for warehousing distribution or branch house operations for the handling of goods of all kinds. Splendid opportunities exist for processing products of agriculture, such as tobacco, corn, soya beans, and cotton.

for warehousing tions for the ha opportunities en ture, such as to We extend y requirements, a

We extend you a cordial invitation to submit your requirements, and you are assured that a confidential report will be submitted to you regarding your particular needs.

# NORFOLK SOUTHERN RAILWAY

J. F. DALTON, Director of Industrial and Agricultural Development
NORFOLK, VIRGINIA



# Non-Spin Wheel Hand Brake

This friction clutch makes it easy—and safe—for the brakeman to operate the Equipco Non-Spin Wheel Brake. He can do it all with the wheel—turn right to set—turn left ("inch it along") to release. There is no spinning of the wheel; no sudden unwinding of the chain; no possible way for this clutch to jam. Like other types of Equipco Hand Brakes, it is built for long, economical and dependable service. Write for literature. Type 3750-A. A.A.R. Certified.

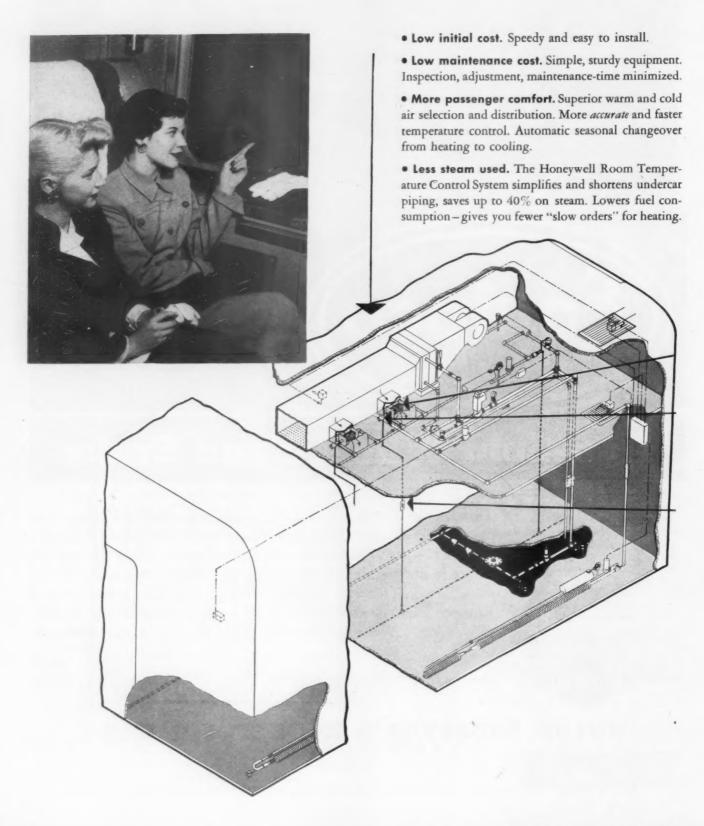


Equipco Hand Brake Department

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# Now...Honeywell brings new advance



# you a great in Room Car Heating!

Simple New Room Temperature Control System provides first practical method for giving room cars individual temperature selection . . . regardless of weather or internal load

**How much passenger good-will** is your road losing each year because of complicated, old-fashioned room car heating systems?

By installing Honeywell's new, greatly simplified Room Temperature Control System in your sleeping cars, you can now give your passengers—for the first time—real, personalized comfort. And in addition, you can eliminate costly man-hours for inspection, maintenance, and adjustment. Multiple steam specialties and other accessories for each room are not necessary.

The system is easy to install and operate, and gives instant room temperature response. Passengers simply dial the temperature that suits them best for *their* room. The discomfort caused by sitting over floor heat coils used for room control is thus avoided. For facts on what this inexpensive new system can do for your road, call your local Honeywell office, or send coupon.

## Better! Simpler! More practical!

There are no complicated controls in the new Honeywell Room Control System. So, of course, maintenance is reduced! There are only three simple parts:

#### **Booster Coil**

Small, compact—fits any size or type of room, master bedroom, or drawing room.

#### Valve

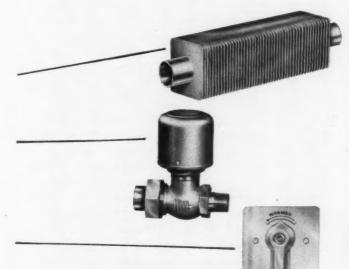
Easy to install. Adjusts effortlessly. Built for low cost maintenance.

### Grad-U-Switch

Simple-rugged-easy to operate. Does not bind or stick. Gives passengers individual temperature control at their fingertips.

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First in Controls





This special folder tells you exactly how the new Honeywell System operates, and why it costs you less to buy, install, and maintain.

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Gentlemen: Please send me com	plete information on:		
New Room Temperature Con	ntrol System for sleeping ca	irs	HONEYWELL
Honeywell Car Heating Syst			
noneywell Car Healing Syst	rem		
Name	(em		
Name	em		
Name			

## Freight Operating Statistics of Large Steam Railways — Selected

				Locomoti	ve Miles	Cer N	Miles	Ton-miles	(thousands	)	Road-loco	s. on lin	168
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	Region, Road and Year	road operated	Train- miles	and belper	Light	(thou- sands)	loaded		non-rev.	Unsto	red Stored	B.O.	Per cent B.O.
*	\$5 Boston & Maine1951 1950	1,691 1,700	263,756 288,285	271,942 298,450	14,004 15,059	10,170 11,796	71.8 72,0	630,467 712,678	276,565 308,754	81 87	6 2	10 16	$\frac{10.3}{15.2}$
Z	2 8 N. Y., N. H. & Htfd., 1951	1,776	297,454	297,605	19,836	11,326 12,964	69.8 70.4	707,699 784,636	314,014 356,507	95 106		6	5.9 8.6
	( 1950 ) Delaware & Hudson	793	309,701 252,615	310,333 292,275	24,245 20,195	11,158	74.2	770,088	425,753	121	13	34	20.2
	Del., Lack. & Western1951	793 964	257,482 276,630	309,467 296,339	32,331 24,124	11,698 12,419	73.8 71.1	804,110 813,948	440,062 379,742	134 77	34 12	28	14.3 9.2
	1950	966 2,243	299,054 654,614	322,362 666,921	32,229 36,725	13,027 35,730	71.9 67.5	830,876 2,284,900	385,521 939,075	85 182	1 26	38 15	30.6 6.7
Region	G	2,231	715,765	745,420	53,435	39,329	71.0	2,435,593 1	,036,544	193	3	33 12	14.4 17.6
B. R.		952 971	262,123 273,263	267,417 $280,711$	2,189 2,842	8,759 9,630	66.9 65.5	590,526 658,229	265,549 291,838	55 54		12	18.2
Lakes	Lehigh Valley	1,210 1,238	255,962 253,221	267,381 265,868	21,568 $26,857$	12,878 12,970	$72.0 \\ 73.9$	878,770 845,123	431,288 415,173	42 46	5 4	8 25	14.5 33.3
T T	New York Central1951	10,675	2,960,283 3,243,910	3,121,868 3,424,552	165,096 205,005	109,820 123,435	63.2 65.2	7,845,500 3 8,507,147 3	,921,044	963 997	121 59	336 331	23.7 23.9
Great	New York, Chic. & St. L 1951 1950	2,161 2,162	798,612 822,393	821,172 839,466	$11,170 \\ 14,380$	31,512 34,768	68.0 70.5	2,187,299 1 2,252,249 1	,023,219 ,046,481	202 203	18 1	37 43	14.4 17.4
	Pitts. & Lake Erie	221 221	94,344 79,094	97,234 80,896	170	4,232 3,350	74.4 69.8	341,173 276,058	215,342 170,321	37		10 16	21.3 35.6
	Wabash	2,381 2,381	528,621 546,431	536,120 554,374	7,810 9,094	22,067 22,963	71.7 71.0	1,406,655 1,425,116	628,337 599,274	150 144	15 12	29 66	14.9 29.7
	Baltimore & Ohio	6,083	1,825,769	2,124,372	235,758	73,790	64.9	5,605,054 2	,869,746	640	78	168	19.0
E	Central of New Jersey1951	6,086 410	1,992,500 75,732	2,404,691 75,990	257,492 3,525	- 71,695 2,946	66.2 68.7	5,476,595 2, 218,406	,770,835 116,431	702 42	28	250 5	25.5 10.6
Region	Central of Pennsylvania 1951	410 210	77,837 71,473	79,049 78,634	4,993 12,246	3,101 2,724	66.1 72.3	232,832 197,839	122,469 109,358	38	• •	3 5	7.3 13.5
	1950 Chicago & Eastern Ill1951	212 886	77,214 132,029	86,638 132,029	15,973 3,520	3,015 5,179	69.6 70.9	223,999 337,826	121,922 167,086	38 27		18	32.1 10.0
Eastern	1950	886	129,238	129,238	2,162	5,420	73.0	334,016	160,759	25 43			
	Elgin, Joliet & Eastern 1951 1950	238 238	105,099 85,090	107,801 88,061	1,000	4,266 3,319	66.5 68.5	345,200 263,418	195,039 149,730	39	104	1	2.5
Central	Pennsylvania System1951 1950	10,045 $10,042$	3,282,524 3,361,172	3,680,270	397,216 429,043	140,659 151,496	69.9	10,083,289 5 10,318,154 5	,218,201	1,182 $1,248$	104	320 380	19.9 23.3
Sea	Reading1951	1,311 1,315	374,186 394,430	384,568 405,870	26,175 29,965	13,742 15,751	67.7 67.9	1,057,154 1,219,394	581,791 678,208	174	32 18	28 31	12.0 13.8
	Western Maryland	837 837	186,737 189,807	221,021 229,572	26,500 26,861	6,598 6,901	65.3 63.5	531,304 561,429	298,599 311,812	125 139	8 25 ·	17 16	11.3 8.9
* 8	Chesapeake & Ohio 1951	5,042	1,538,819	1,619,269	71,979	72,470	58.5	6,287,218 3	,558,817	497	3	243	32.7
Poc	Norfolk & Western1951	5,045 2,113	805,394	1,658,485 859,925	68,727 67,046	68,444 38,173	59.3 58.8	5,721,409 3 3,432,997 1	,895,880	519 244	13 11	146 12	21.5 7.6
	Atlantic Coast Line1951	2,105 5,434	733,474 759,614	766,407 760,041	48,326 12,238	34,827 23,751	59.4 62.7	3,988,147 1, 1,683,526	,607,048 788,096	237 374	21 26	34 133	11.6 25.0
	1950 Central of Georgia	5,480 1,765	754,962	756,784 242,671	11,395	23,115 7,339	66.8	1,544,835 487,906	723,315 229,638	308 84	16	92 21	22.1 19.1
2	1950	1,783	241,432 283,587	291,220	4,451	7,841	74.3	495,632	238,693	95	2	8	7.6
Region	Gulf, Mobile & Ohio	2,851 2,851	308,533 336,267	308,533 336,267	173 314	16,358 16,670	74.3	1,057,981 1,045,450	520,449 495,465	80 65		3	3.6
n R	Illinois Central	6,539	1,562,994 1,552,833	1,557,201	54,570 54,836	54,929 57,369	63.6 65.1	3,998,575 1, 4,053,316 1,	,891,112	558 563	33 13	70 82	$\frac{10.6}{12.5}$
Southern	Louisville & Nashville	4,756 4,769	1,085,061 1,199,372		31,706 35,199	36,453 39,083	64.3 64.7	2,692,632 1, 2,836,948 1,		324 321	29 24	121	17.9 26.0
out	Nash., Chatt. & St. Louis 1951	1,049 1,049	177,356 227,531	179,801 231,907	2,800 3,966	6,218 7,061	75.4	392,310 435,311	191,152 211,818	53 67		6 2	10.2 2.9
002	Seaboard Air Line	4,136 4,136	618,551 669,636	618,551 686,248	1,557 4,812	22,072 23,417	64.4 67.0	1,561,622 1,577,184	727,659 733,079	169 216	92 54	63 11	19.4 3.9
	Southern	6,292		1,148,763	14,187 14,108	40,571 44,120	71.9 73.2	2,557,466 1, 2,709,133 1,	,192,250	369 366	36 28	91 197	18.3 33.3
	Chicago & North Western1951	6,320 7,893	1,027,158	1,049,903	25,758	37,727	63.6	2,734,286 1,	,226,128	334	8	140	29.0
_	Chicago Great Western1951	7,974 1,441	992,829 157,975	1,006,143 157,975	23,890 7,950	37,898 9,102	67.3 71.8	2,650,291 1, 610,706	,117,991 290,841	301	6	108	26.0 3.1
Region	Chic., Milw., St. P. & Pac 1951	1,441 10,664	175,328	176,526 1.357,000	6,012 49,568	10,423 50,016	72.3 64.9	669,453 3,539,864 1,	308,004	34 443	61	1 59	2.9 10.5
	Chic., St. P., Minn. & Omaha . 1951	10,663		1,489,130 231,635	53,503 11,286	57,382 6,538	67.0 66.9	3,862,185 1, 479,100		453 72	28	95 32	16.5 30.8
estern	Duluth, Missabe & Iron Range . 1951	1,606	240,449	251,096 231,373	12,549	16,925	69.0	482,184	223,560	77 66		34	30.6
	1950	566 563	230,035 192,344	194,014	2,131 2,005	10,465 9,411	51.2 51.1	959,166	647,557 580,882	50		2	3.8
Northw	Great Northern	8,309 8,220	1,157,841 1,120,903	1,118,340	44,395 42,894	47,964 48,904	65.7 67.4	3,663,269 1, 3,595,977 1,	,859,924	356 348	91 61	60 67	11.8
ž	Minneap., St. P. & S. Ste. M 1951 1950	4,173 4,179	468,865 422,346	479,545 428,887	6,341 5,870	15,562 15,227	62.5 70.3	1,003,642	547,104 496,306	117		14	6.4
	Northern Pacific	6,591	907,834 699,929	939,148 1,018,816	49,974 58,084	38,945 $42,127$	70.0 70.9	2,713,515 1, 2,947,149 1,	,294,336 ,368,331	327 344	18	70 66	16.9 16.1
0	Atch., Top. & S. Fe (incl. 1951 G. C. & S. F. and P. & S. F.) 1950	13,097	2,663,148 2,665,489	2,786,747	122,249 102,154	107,298 113,370	63.7 68.9	7,346,676 2, 7,325,892 2,		659 637	53 67	135 155	15.9 18.0
Region	Chic., Burl. & Quincy 1951	13,073 8,790	1,336,350	1,357,717	51,867	56,063	64.4	3,923,548 1,	,792,685	356	20	126	25.1
n R	Chic., Rock I. & Pac1951	8,796 7,902	1,303,723 1,052,092	1,065,553	56,520 15,474	56,692 36,142	68.4 64.0	3,781,773 1, 2,530,463 1,	162,828	376 221	37 23	146 79	26.1 24.5
estern	Denver & R. G. Wn	7,579 2,334	1,102,517 358,608	1,140,365 391,979	19,446 45,256	39,272 16,492	68.1 72.7		520,676	256 114	14 29	74 25	21.5 14.9
Wee	Southern Pacific	2,413 8,055	434,801 2,367,051	481,534 2,502,952	46,336 354,528	17,377 100,495	73.4 63.8	1,086,469 6,944,507 2,	528,882 791,404	136 718	16	27 167	15.1 18.7
	Union Pacific	8,069 9,756	2,309,509 2,707,218	2,463,789	339,142 191,764	103,056 116,583	69.7 67.0	6,688,320 2, 7,892,336 3,	771,950	768 600	4 25	133 161	14.7 20.5
Central	Western Pacific	9,720	2,857,562	2,972,717	209,052 19,911	120,891 12,742	67.2 74.8	8,078,896 3,	233,124	619 53	9	137	17.9 21.4
0	1950	1,190 1,192	250,897 291,229	256,582 315,191	31,613	14,887	79.6	904,451	371,808 425,680	70	3	24	24.7
	International-Gt. Northern*1951	1,104	205,408 199,077	205,408 199,591	843 1,516	7,144 6,901	69.3 69.3	489,929	245,838 229,587	44 50	1 5	14	23.7 16.6
uo	Kansas City Southern 1951	886 886	171,833 173,974	171.844	267 1.149	9,186 8,904	70.0 68.0	616,968	294,156 271,653	26 39	8 2	26 15	43.3 26.8
Region	MoKansTexas Lines1951 1950	3,230 3,231	422,624 432,368	177,416 425,299 438,657	7,510 5,150	16,134 16,146	67.8 65.6	1,059,616	472,698 444,617	88 86	6	15 36	13.8 27.7
	Missouri Pacific*1951	6,932	1,323,451	1,346,485	19,196	51,061	68.2	3,449,597 1,	581,422	355	6	60	14.3
ster	Texas & Pacific	6,949 1,844	384,394	1,408,573 384,394	27,089 21,112	53,075 14,600	70.6 59.4	1,065,145	545,268 398,528	370 67	11	57 41	13.3 34.5
Southwestern	St. Louis-San Francisco1951	1,844 4,570	351,966 675,333	351,966 679,994	13,555 7,024	13,729 23,983	68.7 64.1	1,640,729	368,001 734,253	86 193	2 75	101	4.3 27.4
out	St. Louis Southw. Lines 1951	4,604 1,562	678,664 356,602	689,677 361,486	9,021 4,793	24,617 14,750	67.9 71.7		693,405 406,685	206 78	89 10	66 18	18.3 17.0
92	Texas & New Orleans1950	1,562 4,291	375,024 821,452	377,016 821,838	5,059 17,907	15,480 28,185	73.0	910,649	407,520 B17,684	73 235	7	22 38	21.6 13.9
	1950	4,314	814,700	814,700	15,516	27,994			819,783	205		63	23.5

## Items for the Month of August 1951 Compared with August 1950

			Freight	cars on li	ne		G.t.m.per		Net ton-mi.	Net ton-mi.	Car	Net daily	Train- miles	Mi. per
	Region, Road and Year			ml	Cent	excl.locos.	and	train	per l'd	per car-	per car-	ton-mi.	per train-	per
	s ( Boston & Maine1951	Home 1,229	Foreign 8,692	Total 9,921	B.O. 1.8	tenders 37,193	2,397	mile 1,052	mile 27.2	day 883	45.2	road-mi. 5,276	15.6	day 101.5
New	1950 1950 N. Y., N. H. & Htfd	1,517 1,416	9,943 15,187	11,460 $16,603$	3.4	$38,030 \\ 34,627$	2,477 2,380	1,073 $1,056$	26.2 27.7	896 596	$\frac{47.5}{30.8}$	5,859 5,736	15.4 14.6	103.1 $119.6$
	Delaware & Hudson1951	1,719 3,014	18,278 5,838	19,997 8,852	1.5 6.3	35,257 55,318	2,536 3,064	1,152	27.5 38.2	579 1.514	29.9 53.5	6,494 17,319	13.9	108.8
	Del., Lack. & Western1950	2,530 4,228	7,264 10,635	9,794 14,863	7.3 6.5	55,930 45,099	3,134 2,996	1,715 1,398	37.6 30.6	1,433 796	51.6 36.7	17,901 12,707	17.9 15.3	59.8 119.2
	1950 Erie1951	5,639 6,350	11,836 22,372	17,475 28,722	9.9	42,694 59,955	2,842 3,521	1,319 1,447	29.6 26.3	717 1,048	33.7 59.1	12,874 13,505	15.4 17.2	106.9 110.6
Region	Grand Trunk Western1950	7,549	24,293 9,506	31.842 13,249	3.8	58,143 45,058	3,427 2,271	1,458 1,021	26.4 30.3	1,081 658	57.7 32.4	14,987 8,998	17.1 20.0	124.3 137.8
	Lehigh Valley	3,874 2,142	10,928 13,464	14,802 15,606	5.1	45,631 65,200	2,432 3,484	1,078 1,710	30.3 33.5	624 909	31.4 37.7	9,695 11,498	18.9 19.0	151.8 185.4
Lakes	New York Central	4,220 54,305	12,185	16,405 169,607	8.1 6.3	63,008 42,790	3,413 2,693	1,676 1,232	32.0 32.7	839 698	35.5 33.8	10,818 10,842	18.9 16.1	130.8 82.7
eat	New York, Chic. & St. L1951	57,345 4,911	122,935 18,792	180,280 23,703	6.6	43,446 48,102	2,666 2,783	1,229 1,302	31.8 32.5	728 1,302	35.1 59.0	11,831 15,274	16.6 17.6	94.7 113.9
5	Pitts. & Lake Erie	5,090 3,534	20,930 10,796	26,020 14,330	3.6 8.9	48,423 57,033	2,791 3,625	1,297 2,288	30.1 50.9	1,286 451	60.6	15,614 31,432	17.7 15.8	$\frac{119.9}{72.9}$
	Wabash1950	4,554 7,190	11,447 12,821	16,001 20,011	14.6	47,786 54,173	3,501 2,682	2,160 1,198	50.8 28.5	346 1,003	9.8 49.1	24,861 8,513	13.7 20.4	62.0 93.9
	1950   Baltimore & Ohio	5,832	13,202	19,034	3.4	53,612	2,635	1,108 1,591	26.1 38.9	973 912	52.5 36.2	8,119 15,218	20.6 13.8	87.5 89.2
	Central of New Jersey	44,015 35,100	54,943 56,407 9,246	98,958 91,507 9,713	5.8	42,438 36,811	3,107 2,804	1,419	38.6 39.5	1,037	40.6	14,686 9,161	13.4 13.0	90.8 87.8
Region	1950	467 463	10,127	10,590	3.1 4.0	37,456 37,211	3,011 3,092	1,605	39.5	378 722	14.5	9,636 16,798	12.4 15.0	104.7 101.0
	Central of Pennsylvania 1951	1,576	3,248 3,806	4,824 4,892	19.6	41,450	2,977 3,103	1,645	40.1	736	26.1	18,552	14.2 16.2	74.3 158.6
Eastern	Chicago & Eastern III	1,473	2,747 3,707	4,220 5,396	9.9	41,360 43,418	2,567 2,590	1,269	32.3 29.7	1,261 1,020 310	55.1 47.1 10.2	5,853 26,435	16.8	182.2 120.2
	Elgin, Joliet & Eastern	5,724 5,988	15,030	20,754 18,360	2.8	21,388 21,298	3,427 3,255	1,936 1,850	45.7 45.1	259	8.4 31.9	20,294 16,487	6.9	102.0 87.1
Central	Pennsylvania System1951	94,356 92,284	116,461	210,817 219,421	8.6 14.3	47,400 44,492	3,175 3,178	1,617	36.5 34.4	788 758	31.5	16,763	14.5 12.7	88.7 70.3
3	Reading	9,871 10,867	20,690 23,590	30,561 34,457	4.7 6.9	35,865 37,546	2,827 3,092	1,556 1,720	42.3 43.1	624	21.8	14,315	12.1	74.2
	Western Maryland	3,604 4,160	$\frac{3,427}{3,708}$	7,031 7,868	2.2 2.2	41,289 40,116	2,883 3,004	1,620 1,668	45.3 45.2	$\frac{1,303}{1,353}$	44.1 47.1	11,508 12,017	14.5 13.6	57.5 49.6
-83	5 Chesapeake & Chio	50,082 43,408	26,469 29,545	76,551 72,953	4.7 6.1	68,021 60,721	4,128 3,706	2,336 $2,059$	49.1 46.4	1,516 1,380	52.8 50.1	22,769 20,325	16.6 16.6	79.1 90.1
20	Norfolk & Western 1951 1950	28,467 23,453	8,649 8,578	37,116 32,031	1.7 2.6	69,782 66,724	4,343 4,129	2,398 2,221	49.7 46.1	1,656 1,644	56.6 59.9	28,943 24,627	16.4 16.4	116.3 96.6
	Atlantic Coast Line1951	11,893 10,232	16,561	28,454	2.2 4.1	35,247 32,448	2,227 2,055	1,043 962	33.2 31.3	883 896	42.4 42.9	4,678 4,258	15.9 15.9	52.2 65.6
	Central of Georgia1951	1,952	16,094 5,727 5,020	26,326 7,679 6,661	5.8	36,013 30,800	2,033 1,755	957 845	31.3 30.4	1,006 1,113	46.0	4,197 4,318	17.8 17.6	77.5 95.1
Region	Gulf, Mobile & Ohio	3,016	12,081	15,097	4.2	60,793	3,438 3,120	1,691 1,479	31.8 29.7	1,144 1,087	48.4	5,889 5,606	17.7	130.2 178.5
	Illinois Central1951	3,037	12,271 25,920	15,308 47,273	3.0	59,662 44,469	2,593	1,220	34.3	1,279	58.7 59.5	9,284 9.323	17.4 17.8	85.8 84.7
Southern	Louisville & Nashville1951	16,609 25,199	30,741 16,062	47,350 41,261	2.8 10.3	46,346 39,123	2,639 2,489	1,231	33.0 38.1	1,062	43.3	9,424	15.8	97.6 96.7
out	Nash., Chatt. & St. Louis 1950	28,604 1,280	15,756 4,817	44,360 6,097	3.9	37,245 40,060	2,372 2,215	1,212	37.1	1,072	44.7 45.8	9,802 5,878	15.7 18.1	109.7
50	Seaboard Air Line1951	1,398 9,529	5,255 14,163	6,653 23,692	3.7 2.0	37,909 44,092	1,918 2,554	933 1,190	30.0 33.0	1,035	44.5	6,514 5,675	19.8 17.5	71.8
	Southern1950	8,202 12,420	13,918 28,311	22,120 $40,731$	2.4 3.9	40,528 37,476	2,413 2,252	1,122 1,050	31.3 29.4	1,085	51.7 44.6	5,718 6,112	17.2 16.7	81.3 79.9
	Chicago & North Western1951	12,416 18,216	27,983 38,191	40,399 56,407	3.7	35,963 41,976	2,178 2,822	1,007 $1,265$	28.4 32.5	998 739	48.1 35.7	6,391 5,011	16.7 15.8	75.5 80.5
6	Chicago Great Western1951	17,653 1,734	38,116 6,968	55,769 8,702	$\frac{3.3}{2.1}$	41,561 64,197	2,797 3,883	1,180 1,849	29.5 32.0	643 1,163	32.4 50.7	4,523 6,511	15.6 16.6	87.8 174.7
Region	Chic., Milw., St. P. & Pac1951	1,050 28,327	6,454 40,340	7,504 68,667	2.7 3.3	65,440 44,725	3,845 2,732	1,769 $1,275$	29.6 33.0	1,307 793	61.2 37.0	6,895 5,000	17.1 16.5	177.5 87.8
Re	Chic., St. P., Minn. & Omaha. 1951	23,767 1,301	41,319 9,881	65,086 11,182	2.7 2.5	43,125 29,880	2,725 2,271	1,250 $1,099$	30.9 35.5	883 727	42.7 30.6	5,359 4,659	16.0 14.0	95.4 85.6
teri	Duluth, Missabe & Iron Range . 1950	1,351 13,457	9,579 2,527	10,930 15,984	2.6 2.5	27,363 83,680	2,114 4,901	980 2,937	32.3 61.9	687 1,319	30.8 41.6	4,490 36,906	13.6 17.8	83.7 121.5
We	Great Northern 1950	13,645 21,934	$\frac{1,658}{25,075}$	15,303 47,009	2.4	81,596 49,057	5,202 3,201	3,151 1,665	61.7 39.7	1,251 1,423	39.7 54.5	33,283 7,397	16.4 15.5	141.5 84.9
Northwes	Minneap., St. P. & S. Ste. M1951	20,484 5,894	19,905 11,854	40,389 17,748	3.2 5.6	48,668 44,041	3,251 2,441	1,682 1,182	38.0 35.2	1,476 1,058	57.6 48.1	7,299 4,229	15.2 18.3	85.7 134.6
Z	Northern Pacific	6,012 18,255	10,175 21,842	16,187 40,097	5.2 5.0	42,502 49,188	2,409 3,023	1,191 1,442	32.6 33.2	1,033 1,080	45.1 46.4	3,831 6,335	17.9 16.5	128.4 83.8
	1950	16,726 45,246	20,020 32,997	36,746 78,243	4.9	50,047 54,862	3,065 2,774	1,423 1,082	32.5 26.7	1,247 1,134	54.1 66.7	6,680 7,058	16.5 19.9	92.9 118.0
ion	G. C. & S. F. and P. & S. F.) 1950	41,953	35,462	77,415	4.7	55,222	2,765 2,953	1,106	25.8 32.0	1,210	67.9 64.2	7,230 6,579	20.1 18.1	114.9
Region	Chic., Burl. & Quincy	17,609 13,755	25,580 29,440	43,189 43,195	3.8	53,282 53,626	2,909	1,349	30.7	1,322	63.4	6,378 4,747	18.5	85.7
estern	Chic., Rock I. & Pac	10,563 10,283	23,924 23,521	34,487 33,804	3.4 2.7	39,669 41,915	2,414 2,400	1,109	32.2 31.4	1,069	51.9 57.1	5,244 7,196	16.5 17.6	116.1 119.2 92.8
Vest	Denver & R. G. Wn	7,167 7,380	8,018 8,562	15,185 15,942	3.3 4.8	53,431 42,779 47,522	3,094 2,508	1,461 1,221	31.6 30.4	1,203 1,104	52.4 49.4	7,070	17.4	104.1
W le	Southern Pacific	25,136 23,695	51,944 45,367	77,080 69,062	2.5 2.5	45,629	2,987 2,936	1,201 1,217 1,281	27.8 26.9	1,148 1,248	64.8	11,179 11,082	16.2 15.8	112.8
Central	Union Pacific	28,968 25,295	37,587 41,615	66,555 66,910	3.4	63,796 61,998	2,961 2,864	1,146	29.3 26.7	1,656 1,612	84.4	11,287 10,730	21.9 21.9	128.9 138.1
0	Western Pacific	1,656 1,643	3,870 4,309	5,526 5,952	6.9 8.7	68,030 62,294	3,189 3,110	1,493 1,464	29.2 28.6	2,212 2,323	$101.4 \\ 102.1$	10,079 11,520	21.5 20.1	$102.4 \\ 118.0$
	International-Gt. Northern*1951	676 762	7,325 7,854	8,001 8,616	3.2 1.5	47,501 46,085	2,486 2,487	1,206 1,166	34.4 33.3	1,066 878	44.6 38.1	7,183 6,801	19.2 18.7	116.1 104.5
nc	Kansas City Southern	1,101 988	6,702 6,307	7,803 7,295	3.4	68,850 66,255	3,626 3,448	1,729 1,574	32.0 30.5	1,235 1,233	55.1 59.4	10,710 9,890	19.2 19.4	99.1 113.3
legic	MoKansTexas Lines1951	3,204 2,647	7,001 5,592	10,205 8,239	7.8	45,163 44,236	2,521 2,379	1,125 1,032	29.3 27.5	1,510 1,708	76.1 94.6	4,721 4,439	18.0 18.7	130.1 118.3
Southwestern Region	Missouri Pacific*	15,121 14,126	19,158 21,754	34,279 35,880	3.7	49,647 48,870	2,629 2,473	1,205 1,121	31.0 29.1	1,376 1,356	65.2 66.0	7,359 7,173	19.0 19.8	110.2 113.3
pate	Texas & Pacific	1,939 2,480	7,909 7,453	9,848 9,933	6.2	57,813 53,930	2,772 2,600	1,037	27.3 26.8	1,299 1,248	80.1 67.8	6,972 6,438	20.9	123.5 139.9
thw	St. Louis-San Francisco1951	8,034 6,081	14,810 15,156	22,844 21,237	3.3 2.9	44,830 40,203	2,443 2,334	1,093 1,025	30.6 28.2	960 1,066	48.9 55.7	5,183 4,858	18.5 17.3	67.6 68.7
Sou	St. Louis Southw. Lines 1950 1950	1,549 1,379	5,249 4,805	6,798 6,184	1.7 2.4	47,237 48,669	2,554 2,432	1,142 1,088	27.6 26.3	1,878 2,036	95.0 105.9	8,399 8,416	18.5	121.7 128.2
	Texas & New Orleans1951 1950	3,754 3,856	19,913 18,736	23,667 22,592	2.5 2.6	43,194 42,496	2,342 2,291	1,006 1,014	29.0 29.3	1,215 1,194	63.6 59.2	6.147 6,130	18.6 18.7	105.2 104.9
	1930	3,030	10,130	ww,092	2.0	22,390	w, 271	ASSET	=7.0	- 1 × × ×	- F 160	-1100		

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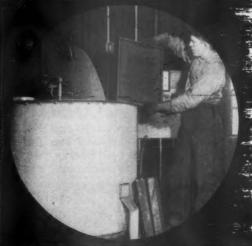
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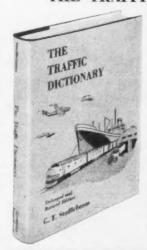
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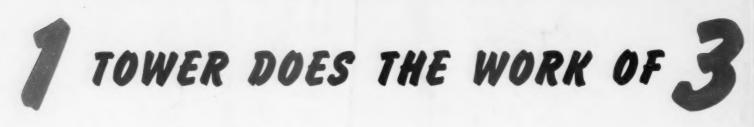
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